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No. IX.—CHRISTMAS, 1885.

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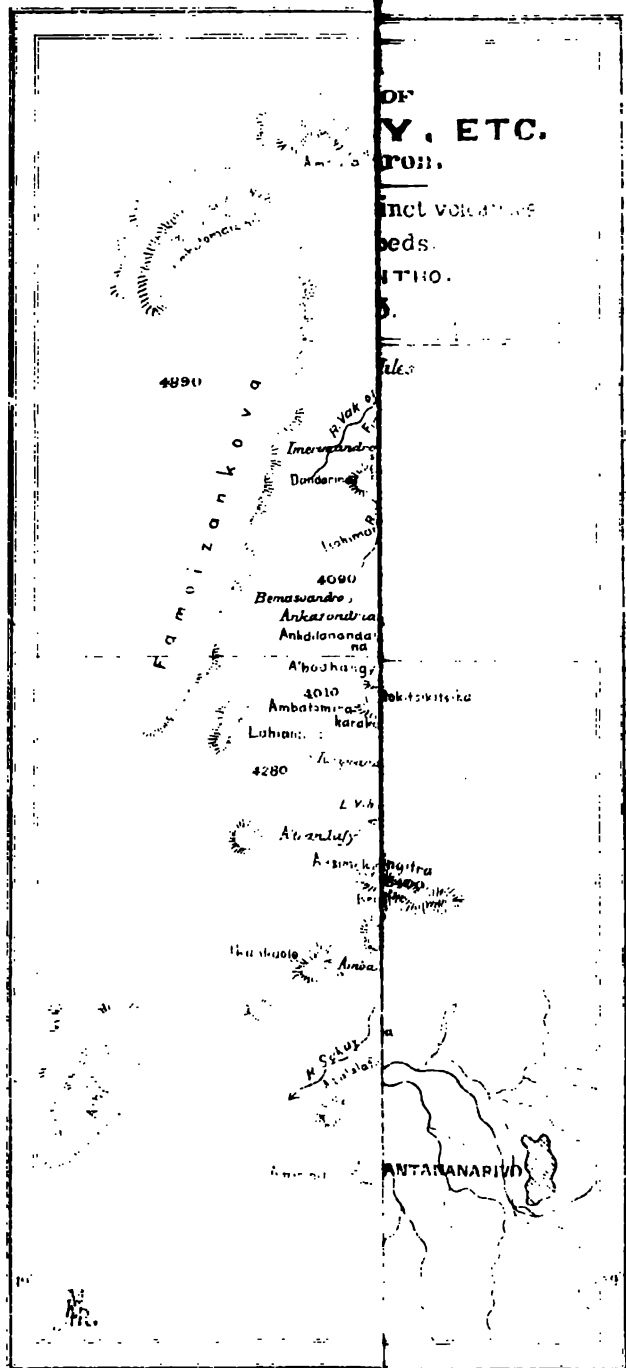
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THE  
**ANTANANARIVO ANNUAL**  
AND  
**MADAGASCAR MAGAZINE.**

A RECORD OF INFORMATION ON THE TOPOGRAPHY AND NATURAL PRODUCTIONS  
OF MADAGASCAR, AND THE CUSTOMS, TRADITIONS, LANGUAGE,  
AND RELIGIOUS BELIEFS OF ITS PEOPLE.



EDITED BY THE  
REV. J. SIBREE, F.R.G.S.  
AND  
REV. R. BARON, F.L.S.,  
*Missionaries of the L.M.S.*



*No. IX.—CHRISTMAS, 1885.*



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\*• *The Editors do not hold themselves responsible for every opinion  
expressed by those who contribute to the pages of the ANNUAL, but only  
for the general character of the articles as a whole.*

THE  
ANTANANARIVO ANNUAL  
AND  
MADAGASCAR MAGAZINE.

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THE RACE ELEMENTS OF THE PEOPLES OF  
MADAGASCAR.

THE ANTANANARIVO ANNUAL for Christmas 1883 contains an article by the Rev. L. Dahle on which I propose to make some observations. Mr. Dahle's conclusions, which he modestly terms his "hypothesis with regard to the origin of the Malagasy race elements," are as follows:—(1) The island, or more probably only the coasts of it, was first occupied by East African tribes (i.e. by the Vazimba and others related to them). (2) There was a series of emigrations "from the island world in the east," peoples from which "took possession of the coasts of Madagascar, conquering the African natives, and afterwards intermarrying and mixing with them to such an extent as to become gradually one people with them,—a mixture of African and Malayo-Polynesian elements." (3) The interior of the island was now first inhabited by the African Vazimba, not very strong in number, who broke through the forests and took possession of the interior, especially Imèrina. (4) The Hova came from the east, and finding the coasts already occupied by a people partly of their own race, and being either unable or unwilling to fight with them, proceeded to the interior. There they settled in Imerina, not mixing with the people of African blood, and as they grew in strength, "the Vazimba, who found themselves too weak to resist them, and were too fond of independence to submit to them, quietly retired towards the west."

No. 9.—CHRISTMAS, 1885.

Let us see what the evidence is on which Mr. Dahle's hypothesis is based. The first conclusion assumes (a) that Madagascar was first populated by East African tribes, and (b) that the Vazimba were of East African origin. The only evidence adduced in support of the statement (a) is the opinion of Dr. Hildebrandt that there is "a strong African element in the Malagasy, especially in the coast tribes." Mr. Dahle, moreover, believes that much of a non-Malayo-Polynesian element in the Malagasy language can be traced to African sources. In the paper read by me in 1869 before the Anthropological Society of London on this subject, reference was made to various facts in support of the opinion that the Malagasy are *related to* the peoples of Southern Africa. This inference, which I still believe to be a fair one, is the widest that the facts will allow, and it is very different from the conclusion which would ascribe to the Malagasy an East African origin. It is said, however, that the Vazimba at least had such an origin. Mr. Dahle admits he is not able to prove that the Vazimba came from Africa, although he believes with Dr. Hildebrandt and others that they are identical with the Vazimba of East Africa. The similarity of name\* is certainly very striking, but unfortunately we know so little of the Vazimba that, even if they were, as Mr. Dahle supposes, the original inhabitants of Madagascar, it is almost impossible to determine their race characters.

Dr. Prichard, in his *Researches into the Physical History of Mankind*, refers to the conjecture made by the Rev. W. Ellis that the Vazimba were the tribe described by Rochon and other writers, under the name of 'Kimos' or 'Quimos,' as a nation of pigmies; a notion more recently entertained by Capt. Oliver in the Memoirs of the Anthropological Society of London (1870). In Dr. Prichard's *Natural History of Man* (3rd ed., 1848), the Vazimba described by Robert Drury are identified with the Hova. The information as to the Vazimba given by Drury† is not altogether satisfactory. After remarking that the Madagascar people probably came first from Africa, he says, "the Virzimbers, indeed, by their woolly heads must come from the more southern part of Africa." He adds, "Deean Tokeoffu told Captain Macket they had a tradition of their coming on the island many years ago in large canoes." This tradition evidently relates to the Malagasy generally, or rather to the Sàkalàva branch of them, of whom Tokeoffu was then one of

\* Commander Cameron, however, sees in this name evidence of Malayan influence. See *Report of Brit. Assoc.* 1879; p. 393.

† I quote from an illustrated edition of his *Adventures*, published at Hull in 1807.

the kings. As to the 'Virzimbers' themselves, Drury gives another description which would seem to show that he applied the name to different peoples. Thus, while living in the country of Mórondava, Drury had an attack of sickness, and he was sent to a Vazimba's house on the banks of the river 'Mernee' to be cured. He lived among those people for six months, and he states that they were almost of a different species "from the others," meaning probably the Sakalava. He says, "their heads are of a peculiar shape, the hinder part and the forehead are almost as flat as a trencher;" which he supposed to be owing to "a daily pressure of their children from the cradle;" and he makes the important remark that "their hair is neither so long nor so woolly as that of the other nations." These Vazimba had a peculiar language<sup>clie</sup> or, probably, dialect, and their religion was different from that of the other natives, as they had no 'owleys' (*ody*) in their houses, but they paid great regard to the new moon and to several animals, among others, a cock and a lizard. At their meals they threw a bit of meat over their heads for the spirits, and they then threw four pieces more "to the sovereigns or rulers of the four quarters of the earth." They dressed their victuals much more agreeably than "the other people;" they were ingenious artificers in many particulars; and they made curious earthenware, glazed within and without. They appeared not to have any general government, but they lived in little towns, each of which was a distinct and independent republic. Drury concludes, "there are some of them, as I have heard, in other parts of the island, scattered up and down, who shift their habitations, which these were wont to do formerly. It is no easy matter to determine whether these are not the original natives, or first inhabitants of the land."

This description is of a forest people, of peaceful and primitive habits, but with sufficient intelligence and docility to understand and accept the civilization of those with whom they came into contact. The woolly-headed Vazimba of Drury are perhaps represented by the people described by Mr. Dahle, on the authority of the Rev. D. Jakobsen, as now dwelling among the Sakalava, and as being not very tall, of a very dark colour, and with rather a flat nose. Dr. Prichard seems to have believed, however, that the *Hova* were described by Drury under the name of 'Virzimbers,' which agrees with the fact of the latter having less woolly hair than the Sakalava. It is somewhat remarkable that the dwarfs or Kimos, who are thought by some writers to have been Vazimba, were referred to by M. de Modave, the Governor of Fort Dauphin, as thick and squat,

being lighter in colour than the other islanders, while their hair was short and woolly. The particulars given by Drury of the Vazimba are important, as they prove the existence among them of a difference of physical characters, such as are now found among the natives of Ankova; and if the Hova are not a pure race, the Vazimba were probably not so either. I may remark here that there is at least as much evidence that the Vazimba element among the Malagasy is Negrito as that it is African. It is strange, nevertheless, that although Drury goes so far as to say that the Vazimba spoke a different language and had different manners and customs from the other Malagasy, yet at the end of his book, while repeating that they differ in some points of religion, he adds, "but then it is to be understood, in the forms and manner of their worship and ceremonies; for they have owleys as others have, and entertain the same notions of a Supreme God, the lords of the four quarters of the world, spirits, etc." The Rev. W. Ellis refers to this idea of the existence of lords of the four quarters of the earth, which he says is regarded in the interior as fabulous, although it prevailed on some parts of the coast.\* In other respects the Vazimba, notwithstanding their physical differences, show little to distinguish them from the other inhabitants of the country. The difference of language spoken of by Drury was probably only one of dialect, such as still exists among the various tribes.

Mr. Dahle states that the unity of language must now be considered as a tolerably well-established fact, in support of which he makes the pertinent remark that the Hova have military stations in a good many places amongst other tribes, and people from other tribes often come to the Capital, and yet they appear not to be in need of interpreters in transacting business. When Drury was living in the island, the Hova could equally well converse with other tribes. He relates that two Hova ('Amboerlambo') ambassadors passed through his town on their way from 'Moherbo' (Mahabo?) to their own country. Drury evidently had no difficulty in conversing with them. Mr. Dahle adduces the fact of the language spoken over the whole island being substantially the same as evidence in favour of the opinion that "the inhabitants of Madagascar, broadly speaking, are one people." There is here a saving clause to provide for the existence of a non-Malayo-Polynesian element in the Malagasy language. He mentions various words which are unquestionably the same in Malagasy as in some of the East African dialects, confirming

\* *History of Madagascar*, vol. i. p. 394. Mr. Ellis states (p. 369) that among the witnesses summoned on the taking of the Hova oath of allegiance are the four cardinal points of the compass.

what was long since pointed out by other writers. But in accordance with the principle laid down by Mr. Dahle, that "similarity in the grammatical structure of the languages of peoples proves more than similarity of vocabulary," I would suggest that the presence of the words mentioned by him, while showing that the Malagasy have had close intercourse with their East African neighbours, is not sufficient to prove the African origin of the primitive inhabitants of Madagascar.

Mr. Dahle says (2) that there was a series of emigrations from the Eastern island world, peoples from which conquered the African natives of Madagascar, intermarried with them and finally formed with them one people. Those emigrants are supposed to have belonged to tribes who spoke dialects of the Malayo-Polynesian language, or a language closely related to it, and to have had the Malayan type of feature, which, however, they lost or had much modified by mixture with the African element. Whether or not the peculiar physiognomy of the dark Malagasy is really due to "a mixture of African and Malayo-Polynesian elements" is nevertheless very doubtful. M. Lesson was so much struck with the resemblance of the Papuans to the dark people of South Madagascar as to believe that the former had proceeded from this island; and he appears to have been no less struck with the resemblance between the dark Malagasy and Kafirs of South Africa. What Lesson says of the Papuans applies equally to the Melanesians, agreeing with Mr. Dahle's statement that the Malagasy language is partly related to the Melanesian. In that case, however, we have no occasion to look for the admixture of an African element to account for the physical peculiarities presented by the coast tribes of Madagascar. It is important in this connection to consider certain facts as to the distribution of the people on the western side of the island mentioned by Drury. He states, while speaking of the Sakalava chief Ratrimanongarivo, that "Saccalauvor was neither richer nor more powerful than other countries, till his accession to the regal state." Drury goes on to say that the Sakalava king having expelled both his brothers, one of them fled to Feraingher (near the river Onilâhy, which runs into St. Augustine's Bay) and settled in the country to the south; while the other proceeded northward, passing through "the fine country where the cattle are kept, and where the Virzimbers at that time resided. . . . the Virzimbers fled from him on his first approach, but finding that his intentions were peaceable, and that he was only seeking a place of refuge for himself, they returned to their habitations, and lived under his jurisdiction." Ratrimanongarivo followed his brother's



example, and "now caressed some of the Virzimbers, and gave them towns on the banks of the Mernee." According to Mr. Dahle's hypothesis, the Malayo-Polynesian ancestors of the present coast tribes acquired their 'African' features by intermarriage with the Vazimba. From Drury's account, however, it is evident that the Sakalava were the same in physical characters as they are now, and there is no evidence that they had intermixed with the Vazimba before Drury's time. He states that many of these people were then living in the Sakalava towns in that district, but this intercourse would not have taken place before the Sakalava occupied the country; and elsewhere Drury says, "the Virzimbers till very lately were under no government, and often changing their habitations." The Sakalava used to go into their houses and take away anything they liked, and to prevent this intrusion, the Vazimba kept their houses well supplied with a kind of cow-tick, of which the other natives had much dread. When residing further south, Drury met with other members of the Vazimba stock. He refers to them as "people in the remote parts of this country, whose habitations are in secret recesses in the woods," and who "keep no cattle, lest the vociferations of their herds or flocks might possibly betray them, . . . . but content themselves with small plantations, and the products of nature." Drury's master, the chief's cow-keeper, had formerly lived after that manner, and was therefore "acquainted with some of their private settlements."

The Sakalava migrations referred to by Drury had evidently taken place not long before his time. Mr. Sibree thinks\* that Ratrimanongarivo was the son of the chief Lâhifôtsy, who, in the year 1649, conquered part of the country called Ménabè, and whose tribe had been rising into power for some time previous to his reign. Mr. Sibree states that Lahifotsy, after crossing the St. Vincent River, conquered the Antangandro. He does not say whether this was a kindred tribe, or whether it belonged to the Vazimba stock, but he refers to a tradition, according to which the Antangandro retired precipitately, leaving the country open to the Sakalava. This shows that the conquering tribe did not intermix with the previous inhabitants of the country, which, according to Drury's account, must have then been very thinly populated. Curiously enough, although there is no evidence that the Sakalava intermarried with the earlier inhabitants, it would seem that their leader had European blood in his veins. Mr.

\* ANTANANARIVO ANNUAL, 1878; p. 57. [My information was, however, as there stated, entirely derived from M. Gaillain's book.—J.S.]

Sibree mentions that, according to tradition, the grandfather of Lahifotsy was "a white foreigner who had by some accident come into the country." He adds that both on the western and the eastern coasts a foreign element has often been a means of exercising authority and chieftainship; and he points out that many of the most powerful Bêtsimisâraka chiefs were descended from European fathers.

Mr. Dahle supposes (3) that the interior of the island was first inhabited when the Malayo-Polynesians conquered the Vazimba, who then settled in Imerina. According to the hypothesis the Vazimba were not then a very strong body; and yet not only did they succeed in breaking through the primeval forest, but they left behind them a number of individuals sufficient by intermarriage to modify the physical characters of their conquerors to such an extent as to impress on them an African physiognomy. Now, although we may well believe that the coast was inhabited before the interior of the island, yet the interior need not have been occupied as the result of the advent of fresh peoples on the coast. There is indeed no evidence of an African people, Vazimba or other, having settled in Imerina owing to the influx of Malayo-Polynesian tribes.

Mr. Dahle's fourth conclusion is that (a) a new body of emigrants from the east (the Hova) landed on the coast, from whence (b) they, by arrangement with the coast tribes, proceeded to Imerina. Here (c) they found the Vazimba, who neither resisted nor submitted to them, but quietly retired towards the west, where they have been allowed to live as a separate tribe up to the present time. The Hova have therefore (d) preserved the Malayan character to a greater extent than the coast tribes. As to (a), the Eastern origin of the Hova proper is admitted by all writers, but that they were the latest arrivals is by no means certain. The inhabitants of mountainous and forest regions are generally thought to have been the first settlers, who have been pushed forward by later comers. Probably we have in the lighter colour of the Hova the best evidence of their arrival in the island at a more recent date than the darker tribes. But this is not conclusive, as the olive complexion\* of the Hova may be the result of intermarriage between a lighter race, such as the Arabs or Indo-

\* It should be mentioned, however, that this complexion has been accounted for in other ways. Capt. Oliver says the Hova wear more clothing and expose their bodies less than any of the coast tribes; "besides, living in a mountainous district at high elevations, with a cooler and more salubrious climate, generally conduces to fairness of complexion." This reasoning will hardly apply in the present case, however, as all the natives of the mountainous regions of the interior are not light-coloured.

Chinese, with a darker race, such as the Vazimba are said to have been. Mr. Ellis points out that, although Ankova is the principal residence of the olive-coloured races, yet there are quite as many black inhabitants of Ankova; in fact, "there are comparatively few who are not black residing out of Imerina." The light-coloured ancestors of the Hova probably settled in Imerina and intermarried with the Vazimba who then inhabited it, the Hova of the present day being their descendants, and the Vazimba element showing its influence particularly among the dark tribes of Ankova.

It is said (*b*) that the new body of settlers proceeded to the interior by arrangement with the coast tribes. The opinion expressed by Mr. Dahle that the ancestors of the Hova landed on the *west* coast, and that the dark tribes allowed them to proceed to the interior, is improbable in the extreme. The Rev. A. Walen remarks as to the Sakalava, that they have sworn a mortal enmity against the Hova. Their hatred of this people is of very old date, "and has gained strength from the traditions of their forefathers, which have been handed down to the present generation." It is shown even in their ceremonies. Moreover, Mr. Ellis states that the general belief of the Hova was that they came from the south-east coast and gradually dispossessed the aborigines of the country; and Mr. Sibree mentions\* that "the progress of the Hova from the eastern coast to the highlands of the interior can be traced by the remains of the furnaces they made for the smelting of iron." The Hova tradition and Mr. Walen's statement as to the enmity between the Sakalava and the Hova agree with certain remarks made by Drury. He says, when speaking of the country of the Hova, which he calls 'Amboerlambo' (then divided into two kingdoms governed by two brothers), that the king of the Sakalava would not permit his people to supply them with firearms. He adds, "before the Europeans had stocked the island with guns, they were too strong for the Saccalauvors in Deean Lohefute's (Lâhifôtsy) time, but this king is at present too powerful. They have a trade sometimes to Mattatana and Antenosa, but not sufficient to furnish them with arms and ammunition." That statement as to the relative power of the Hova and the Sakalava before the time of Ratri-manongarivo disposes of Mr. Dahle's argument drawn from the payment of tribute by the Hova to the king of Menabe up to 1820, and throws doubt on the native tradition that the Hova were *at first* looked upon with contempt by the other

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\* *Proc. Roy. Geog. Soc.* Oct. 1879.

ss. Their associations were chiefly with the east and h-east coasts, and I would submit that the opinion before-  
 essed by me that individuals of a light stock gradually  
 ad from thence to the interior, intermarrying with the  
 er inhabitants, is more reasonable than that which supposes  
 be of Malays to have landed on the west coast, or even  
 he east, and to have been permitted by the coast tribes  
 ass through their territory and settle in the interior.

r. Dahle supposes (c) that when the Hova reached Ime-  
 , they found it inhabited by the Vazimba, who then quitted  
 country and retired towards the west. However true the  
 er part of this supposition may be, the latter part is purely  
 othetical, and, so far as I can judge, the evidence points  
 her way. The Vazimba are spoken of by Mr. Dahle as a  
 k people who, after flying into the interior from one set  
 nvaders, abandoned their homes once more when they  
 id themselves threatened by the Hova. This, however, is  
 consistent with what we know of the early inhabitants of  
 rina from their monuments and the evidence of tradition.  
 rs erected by former generations on the summits of the  
 ntains of Imerina and the other divisions of Ankova to  
 memory of giants and other monstrous beings supposed  
 belong to a fabulous age still exist, and are visited by  
 people for prayer and sacrifice. On the tops of some of  
 e mountains are also the vestiges of ancient villages.  
 rs are met with throughout the whole of Ankova, and  
 uently the sites of them are high places and groves.

r. Ellis says the usual name for them is 'Vazimba,' i.e. V  
 rs raised to the Vazimba. He refers particularly to the  
 b of the renowned giant Rapêto, on the summit of the  
 ntain Ambôhimîangara. The wife of the giant was Ra-  
 ao, and a clan still exists in Ambôdirano who claim to  
 descendants of the giant family.\* The Vazimba must  
 efore have been very numerous and, according to the  
 nds connected with their high places, a powerful race.  
 at has become of this race? Surely they were not repre-  
 ed in Drury's time merely by the simple people described  
 im under the name of 'Virzimbers.' These may have been  
 ng their descendants, as no doubt are the people calling  
 nselves Vazimba who now live among the Sakalava. The  
 ra themselves are, however, just as likely as any other  
 ple to be representatives of the Vazimba of tradition. Mr.

Mr. Dahle speaks of Rapeto and Rasoolao as the two last chiefs of the Vazimba. If  
 according to present Hova tradition, it cannot be very reliable, except only as  
 ice of the respect in which the Hova hold the memory of the Vazimba.

Ellis, after referring to the fact that the Vazimba graves correspond with the description given by Rochon of the graves of the dwarfs or Kimos, states that it is somewhat remarkable that many of the particulars given by Rochon and other writers exactly correspond with the Hova, excepting their diminutive stature. He continues, "the Hovas are certainly below the general stature of the Malagasy, and this may easily have given rise to the report of their 'pygmean' dimensions. But in regard to valour, intelligence, activity, industry, courage, manufactures, productions, habitations, the Hovas are what Rochon describes the Kimos to be." It may be added that in the form of the head, the Hova appear to agree somewhat with the Vazimba as described by Drury. This writer says "their heads are of a peculiar shape, the hinder part and the forehead are almost as flat as a trencher." The Hova are said by Capt. Oliver to have "well-shaped heads, rather flattened at the back, with high foreheads," characters which were very noticeable in the ambassadors from the widow of Radama, who visited London in 1835, all of whom, according to Prichard's *Natural History of Man*, bore the most striking resemblance to each other.

That Drury's 'Amboerlambo' were really Hova is shown by the "vast large ears, with silver plates in them, that glittered like comets," by which the men seen by Drury were distinguished. Mr. Ellis mentions that Radama abolished all the native distinctive marks of office, except one retained "in favour of venerable men, or elders, who often wear a large heavy silver ring hanging from each ear, its weight being such as to pull down the ear like a cord, until the ring touches the shoulders." Drury was told that sometimes the hole was so large that "a woman may put her hand through it." Mr. Pickersgill,\* when travelling among the Sakalava, met with women who "had their ears bored and stretched, and the big ugly hole filled with a circular wooden ornament." These people were ignorant of the Hova dialect, which was accounted for by their having quite recently come from the west; a statement which will allow us to believe that the special language ascribed by Drury to his 'Virzimber' was merely a different dialect.

There are facts in the history of the Hova which prove that, if not actually descended from the Vazimba, they were intimately connected with them. Mr. Ellis states that Rabiby, or Ralambo, "is usually mentioned in *kabarys* as the ancestor

\* ANNUAL, 1875. p. 88.

of the present race of princes in Imerina; and, whatever may be the collateral branch of his descent, the princes of Madagascar must be able to trace their pedigree from the renowned Ralambo." This prince, from whom many of the nobles in Imerina claim their origin, and who is supposed to have first taught the Malagasy to eat beef and pork, was the son of the Vazimba Andriamanelo. This chief was celebrated as the introducer or modifier of the ceremony of circumcision. Mr. Ellis states, moreover, that by means of the fire-arms which Andriamanelo obtained from traders on the coast, he subdued all the other Vazimba and rendered himself the most powerful chieftain in that part of the island. It is true that a different version is given by Mr. Dahle, who speaks of Andriamanelo as a Hova chief who defeated the Vazimba by the use of 'flying-iron,' i.e. iron spears. The father of the chief, who is named by Mr. Ellis Andriampônga, is no doubt, however, the same as Andrianampônga mentioned in the ANTANANARIVO ANNUAL for 1877 (p. 3 *et seq.*), a Hova chief who resided at Ifanongoávana, the ancient seat of the Hova kings. He is said to have followed Andrianahitràhitra, a Vazimba, who must be identified with a chief of the same name who is the ninth in the line of Radama's descent given by Mr. Ellis.

Mr. Dahle's fourth conclusion supposes (*d*) the Hova to have preserved Malayan features to a greater extent than the coast tribes. Whether the Hova do really resemble the Malays is, to say the least, an open question. Dr. Prichard, while believing them to belong to the Malayo-Polynesian stock, observes that they have not "the complexion of the Malays, but rather that of the Oceanic Polynesians." In Prichard's *Natural History of Man* it is said, however, that if the ambassadors from the Queen of the Hova may be considered as specimens of the Hova race, "it must be allowed that this tribe has acquired a peculiar physiognomy, having nothing of the Chinese type, to which the proper Malays approximate; neither has it the almost European character of the Polynesian Islanders;" an opinion in which, judging from the portraits I have seen, I quite coincide. Dr. Prichard quotes the opinion of William von Humboldt, given in his *Kawisprache*, that "it is certain that a tribe of people akin to the Malays must have settled in Madagascar, and brought with them a language which entirely superseded and extinguished any pre-existing dialect that may have been spoken in the island." The Malagasy approaches, however, most nearly to the Tagala of the Philippine Islands, but Von Humboldt thought it might have originated from Java, "in times antecedent to the introduction

of Indian refinement" in this island; although, as he shows, the Malagasy contains Sanskrit words expressive even of common ideas. That view agrees with the suggestion made by Mr. Ellis, and apparently accepted by Dr. Prichard, that the Hova migrated from Java. In this case, however, the Hova should, which they do not, possess Malay features, unless indeed they left that island before the advent there of the Mongoloid people from whom the Malays have sprung. Mr. A. H. Keane affirms that "Malaysia was originally peopled by the Mahori [Polynesian] race, which afterwards became modified in various proportions by fusion with intruding peoples from the north;" or, in other words, there was "a fusion of an original Mahori stock with various sub-Mongolian and other Asiatic peoples, resulting in the present Malay and sub-Malayan races of the Archipelago." Mr. Keane has since expressed before the Anthropological Institute of Great Britain his views as to the native populations of the Indian Archipelago. He states\* that "Western Malaysia is now almost exclusively occupied by the fair and yellow stocks from Indo-China, everywhere intermingled in diverse proportions, but the fair, as the earliest arrivals, everywhere forming the substratum." He says further that although "the Malay is ethnically a mixed type, its speech is unmixed in structure, and fundamentally related to the Cambodian and other languages spoken by the fair races of Further India." If that be true of the Malays of Java, it must be true also of the Hova of Madagascar, on the assumption that their ancestors came from Java after the Malay race became established on this island. According to Mr. Keane's hypothesis, the Malays, although of mixed blood, are practically an Asiatic Mongoloid race who have exchanged their language for that of the fair or Caucasian race who preceded them in the Indian islands. The possession of this language by all the Malagasy tribes is therefore no proof that they are really one people, and still less that they, or any of them, are Malays.

Mr. Dahle refers to the comparison made by me between the customs of the Malagasy and the Siamese, and he takes exception to my statement that "it is to the region inhabited by this and cognate peoples I would refer the origin of the Malagasy." My general conclusion as to the race affinities of this race was that, "while they present many points of agreement, either original or derived, with the natives of the African continent, their closest relationship is with the Mongoloid peoples who inhabit the Asiatic region of Indo-China," that is,

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\* *Journal*, 1880; p. 287.

the region from whence the ancestors of the Malays were derived. Mr. Dahle mentions the remark of an Arab geographer Ibn Seid, that a tribe called Komr, who were "the brethren of the Chinese," had emigrated to a great island in the west, which they called after their own name, and there built a town called Malay. Mr. Sibree, in a very interesting paper on "Malagasy Place-names," read before the Royal Asiatic Society of Great Britain,\* quotes from an old German work that the Arabic geographers wrote the name given by them to Madagascar either 'Kamar' or 'Komr', "the same word which enters into the name of the Comoro Group, to the north-west of Madagascar." Mr. Sibree adds that these islands are called by the Arabs 'Komair' or the 'Lesser Komr,' and that this name as applied to Madagascar itself survived until the arrival of the Portuguese. He also says that on one of the oldest maps the name 'Komortina' occurs in addition to 'Madagascar' and 'San Lourenço.'

The name Komr was that of the emigrating tribe, and possibly it may be connected with that of a people in Further India who are regarded by Mr. Keane as representing the primitive stock from which the Polynesians were derived. It is true that Mr. Keane looks upon the Khmers or Cambodians, the people in question, as Caucasian, but this can hardly be correct if Ibn Seid was right in speaking of the Komr as the "brethren of the Chinese." The Arab writer may, however, have referred to another people of Indo-China. When the Khmers first reached this country, they found it occupied by the Chams and the Chavas or Malays. The Chams had established a powerful empire, that of Ciampa, and, if not of the same origin as the Malays, they have like them a tonic language. The Khmers, whose civilization is shown by M. Moura† to have been of Hindu origin, became intermixed with the Chams and other Mongoloid peoples, and the French writer thinks that, during the earlier centuries of their establishment in the south of Indo-China, they were also visited by hordes of Mongols and Thibetans. These were followed by the peoples of the Thai race, including the Siamese and Burmese, who now occupy the country. The Siamese were the first to encroach on the kingdom which the Khmers had established on the ruins of that of the Chams, and they are said by M. Moura to agree with the Khmers, not only in religion, but also in manners and customs; and no doubt, as the latter mixed with the Chams, so the

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\* *Journal*, vol. xv., part 2.

† *La Royaume du Cambodge*.



Siamese became mixed with the Khmers. These facts appear to furnish a complete justification for my assertion that the Malagasy are related to the Mongoloid peoples of Indo-China. The fact that the Malagasy speak a language belonging to the Malayo-Polynesian family shows only that they have come under the same or analogous influences to those which led the Malays (assuming Mr. Keane's hypothesis to be correct) to accept a language which did not belong to their Mongoloid ancestors.

Little is known as to the cranial conformation of the Malagasy. As to the Polynesians, we have the authority of Dr. Topinard for saying that they approach the Malay type, which is short-headed, and by its orbital index, as well as its nasal index, it belongs to the same group as that of the Chinese, the Malay, and the American. Moreover, "the sub-nasal prognathism of the Polynesian shows the influence of the yellow and black populations with which he has been mingled."\* Elsewhere I have shewn that the Polynesians are entitled to be classed with the bearded races, but there is no doubt that among some of them at least the beard does not grow so readily as with Europeans. The Malagasy are less bearded than the Polynesians, and they are probably entitled to be classed with them as approaching brachycephaly. Dr. J. Barnard Davis gives the measurement of a Betsimisaraka calvarium, which he says appears to be less dolichocephalic than the races of the continent of Africa, and he adds, "such seems to be the general character of the skulls of the people of Madagascar." It is possible that the Malagasy possess a strong element of the pre-Malay population of the Indian Archipelago, which Mr. Keane supposes to be Caucasian, although the evidence in favour of that idea is very slight. Mr. Ellis remarks that "the vigour of health frequently gives a ruddy tinge to the countenance of the olive-coloured race;" which removes them in complexion from the yellow hue of the Malays. This would seem to approximate them to the wild tribes of Indo-China, but not necessarily so; as Mr. Shearman, the Editor of the *British Burma Gazetteer* (note, p. 155), remarks that he was much struck with the ruddiness of the complexion of the Burmans living several hundred miles above Mandalay.

The chief difficulty in connection with the Malagasy is the existence side by side of dark tribes with frizzy hair and light tribes with straight hair, all speaking the same language and forming apparently but one race. There is a

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\* *Anthropology*; p. 478.

similar phenomenon, however, in New Guinea, the light-coloured peoples of which, and not the dark tribes, are supposed by Signor d'Albertis to represent the earliest inhabitants of the island. Dr. Comrie, on the other hand, came to the conclusion that the light and the dark peoples belong to the same race, an opinion which does not allow for the crossing of races which has undoubtedly taken place in New Guinea as well as in all other parts of the Asiatic Archipelago. In a paper on "*The Papuans and the Polynesians*" read by me in 1882 before the Anthropological Institute of Great Britain, the importance of the Negrito element in determining the origin of the special peculiarities of the dark race of the Indian Archipelago was dwelt on, and reference was made to the opinion of Prof. Flower that the Negritos represent "an infantile, undeveloped, or primitive form of the type from which the African Negroes on the one hand, and the Melanesians on the other, with all their various modifications, may have sprung." In the influence of that Negrito element we have probably the origin of some of the peculiarities of the Malagasy, but whether these have been impressed on the Mongoloid people who form the chief element in the inhabitants of Madagascar before or after their settlement in the island is doubtful. That the Negritos existed in Madagascar before the arrival of the Malayo-Polynesian speaking people is extremely probable, and they may have aided in the formation of the physical characters of the Malagasy,\* but the complete explanation of the origin of those characters will be possible only when the wider question of the origin of the Papuan and Melanesian races has been satisfactorily determined.

Mr. A. H. Keane affirms that "Malaysia and Western Polynesia were originally occupied by two dark autochthonous types, for the present to be held as distinct,—the Papuans mainly in the East, the Negritos mainly in the West." The Negritos are still represented by *disjecta membra* in certain islands, but elsewhere "they have been rather supplanted than absorbed by the intruding fair and yellow races from Indo-China." The Papuans are represented by compact masses in and about New Guinea; elsewhere "they have rather been fused with than supplanted by the fair and yellow races," the fusion resulting in the so-called 'Alfuros' of Ceram and other islands west of New Guinea, and in the Melanesians of the Admiralty and other islands east of New Guinea. Therefore,

\* The Hova woman figured at p. 137 of Mr. Ellis's *Three Visits to Madagascar* presents a striking general resemblance of feature to the Negrito woman of North Luzon, one of the Philippine Islands, given in plate 8 of Gerland's *Atlas der Ethnographie*.

if there has been any such fusion in Madagascar, we may suppose the dark element to have been Papuan rather than African, and Mr. Dahle admits, what the Rev. R. S. Codrington has recently pointed out,\* that there is a Melanesian element in Malagasy. Mr. Codrington goes so far as to say that "a very limited view of Malagasy grammar, obtained by one who is familiar with a Melanesian tongue, shows so many points of resemblance that a list of words common to Malagasy and a Melanesian tongue comes to have a secondary value." Mr. Codrington sees so great a likeness, physically as well as in language, between the people of Madagascar and Fiji, for example, that they might be taken as branches of one common ancient stock, who have gone off east and west from the original seat of the race. He thinks, however, the most reasonable supposition is "that the substratum of all the races and languages is that ancient one; but that as generations have come on, and islands have been peopled by successive movements or accidents, the later immigrants have been more mixed with the foreign element which is most conspicuous in the Malays." This opinion† agrees, on the whole, with the conclusions I have myself arrived at as to the Malagasy; but in addition I see in the Hova the result of a still later introduction of a light element, probably Arab, which is not wanting among the Papuans, although its influence with them is not so observable.

C. STANILAND WAKE.

X

#### THE OLDEST INHABITANT OF THE REGENT'S PARK GARDENS.

THE oldest inhabitant in the zoological collection in the Regent's Park has died. This interesting individual was a specimen of the black parrot (*Coracopsis nigra*, L.) from Madagascar. It was presented to the Society by the late Mr. Charles Telfair, a corresponding member, so far back as July, 1830, just two years after the gardens were opened. This bird has therefore lived for fifty-four years in the gardens. How old the parrot was when it arrived we cannot learn beyond the fact that it was represented as an "adult bird." The ancient parrot seemed until very recently to have carried his half-century of years lightly enough, nevertheless, his keeper remarked that he was a little dull of late, although he fed well. One morning, however, the parrot was found dead in his cage, having previously shown no symptoms of ill-health.—*Land and Water*.

\* ANNUAL; 1882, p. 26.

† In a more recent Memoir "On the Languages of Melanesia," Mr. Codrington says: "One who is acquainted with one or two Melanesian languages finds himself at home with the vocabularies and grammars of all the Ocean languages, Melanesian, Polynesian, Indonesian, Malagasy."—*Journal of Anthropol. Inst.* Aug. 1884; p. 39.

## ROBERT DRURY'S "MADAGASCAR:" IS IT A FICTION?

**'MADAGASCAR:** or, *Robert Drury's Journal, during Fifteen Years' Captivity on that Island*, was first published on the 24th May, 1729, and is," says Mr. William Lee, "in many respects, one of the most interesting accounts that appeared between the date of *Robinson Crusoe* and the death of Defoe." Madagascar was a centre around which much of our author's genius in fictitious writing turns; and although surrounded by savage human beings, the isolation of the English boy Drury is perfect. Many parts of the book, on religion, and the origin of government, are avowedly the work of an editor; and there are occasional turns of humour resembling Defoe, but the language rarely does so. It is certain that there was a Robert Drury,—that he had been a captive as stated,—that he wrote a large account of his adventures,—that he was seen, questioned, and could give any information required,—after the publication of this book. In the latter part of his life Defoe had many imitators; I think one of them very ably edited Drury's manuscript. Possibly Defoe may have read it and inserted some sentences, but as I am in doubt even of that, I cannot place the book in the list of his works."—*Daniel Defoe; His Life and hitherto unknown Writings*; by William Lee; vol. i. p. 448.

It is regarding the authenticity of this narrative, rather than the authorship or editing of the work, that I would here make a few remarks, in the hope of eliciting from more qualified persons further light upon the subject.

Having lately been occupied in drawing up a Bibliography of works relating to Madagascar, I was naturally attracted by the prominent position which *Drury's Journal* has hitherto occupied as a standard authority on that island. Ellis, Barbié du Bocage, Macé Descartes, Sibree, Mullens and others, have all taken for Gospel truth the statements as to the manners and customs of the tribes inhabiting the south and west coasts of Madagascar which are to be found in the curious relation of Robert Drury.

I have not seen a copy of the first edition, but a copy of the second is now before me, belonging to the London Library. The title of this is:—

"Madagascar: or Robert Drury's Journal, during Fifteen Years' Captivity on that Island. Containing

- I. His Voyage to the *East Indies*, and short Stay there.
  - II. An Account of the Shipwreck of the *Degrave* on the Island of MADAGASCAR; the Murder of Captain Younge and his Ship's Company, except Admiral BEMBO'S son, and some few Others, who escaped the Hands of the barbarous Natives.
  - III. His being taken into Captivity, hard Usage, Marriage, and Variety of Fortune.
  - IV. His Travels through the Island, and Description of it; as to its Situation, Product, Manufactures, Commodities, &c.
  - V. The Nature of the People, their Customs, Wars, Religion, and Policy: As also, The Conferences between the Author and some of their Chiefs, concerning the *Christians* and Their Religion.
  - VI. His Redemption from thence by Captain MACKETT, Commander of the *Prince of Wales*, in the *East India* Company's Service. His Arrival to *England*, and Second Voyage thither.
  - VII. A Vocabulary of the *Madagascar* Language.
- The Whole is a Faithful Narrative of *Matters of Fact*, interspersed with a Variety of surprising Incidents, and illustrated with a Sheet Map of *Madagascar*, and Cuts.
- Written by Himself; digested into Order, and now published at the Request of his Friends.

The Second Edition.

LONDON: Printed, and Sold by J. Brotherton, in *Cornhill*; T. Worrall at the *Judge's Head* in *Fleet street*; and J. Jackson near *St. James' Gate, Pall-Mall*. MDCCXXXI. Price bound Six Shillings."

Now nine years previously, in 1720, Defoe had written *The Life, Adventures and Pyracies of the famous Captain Singleton*; and in 1719 had appeared, by the same author, *The King of the Pirates; Being an Account of the famous Enterprizes of Captain Avery, the Mock King of Madagascar. With his Rambles and Piracies; wherein all the Sham accounts formerly published of him are detected. In two Letters from himself; one during his Stay at Madagascar, and one since his Escape from thence.*

All these works, like Robinson Crusoe, were written as autobiographies, and amongst the publishers for whom they were printed, there always appears the name of "J. Brotherton in Cornhill."\* It may be remarked that the scene of a portion of

\* In the first edition of *Drury's Journal* now before me, and dated 1729, Brotherton's name does not appear, but those of W. Meadows, J. Marshall, and J. Worrall are given. It is also said that the book is to be had of "the Author, at Old Tom's Coffee-house in Birchin Lane." By the way, the 'certificate' by Wm. Mackett is dated May 7, 1728, but the date on the title-page is MDCCXXIX.—ED. (J.S.)

Singleton's adventures is laid also in Madagascar. According to Mr. Lee, "Defoe must have felt that, in writing a preface, his task was needless, as a recommendation. His brief simple address is therefore intended to aid the *little artifice* he had merely edited Crusoe's own narrative" (p. 292).

In addition to such an artifice (supposing *Robert Drury's Journal* to be fictitious), the editor, whoever he may be, inserts a preface before his preface, as follows:—"This is to certify, that Robert Drury, Fifteen Years a Slave in Madagascar, now living in London, was redeem'd from thence and brought into England, his Native Country, by Myself. I esteem him an industrious Man, of good Reputation, and do firmly believe that the Account he gives of his Strange and Surprising Adventures is Genuine and Authentick. May 7, 1728.—MACKETT."

Let us compare the two prefaces, viz. that of Crusoe with that of Drury:—

## CRUSOE.

"Ever the Story of any private Adventures in the World were making Publick, and were made when Publish'd, the Editor Account thinks this will be so. Wonders of this Man's Life I tell all that (he thinks) is to be extant; the Life of one Man scarce capable of a greater Variety. The Story is told with so much simplicity, with Seriousness, and with judicious Application of Events to cases to which wise Men always refer them, (*viz.*), to the Instructions derived by this Example, and to the praise and honour the Wisdom of Providence in all the variety of our circumstances, let them happen how they will. The Editor believes *this* to be a *just History of Fact*; nor is there any appearance of fiction in it; and however thinks, since all such things are dispatch'd for the Improvement of it, as well to the version as to the *Instruction* of the Reader, will be the same, and as he thinks, without further Compromise to the World, he does them a Service in the Publication."

## DRURY.

"AT the first Appearance of this Treatise, I make no Doubt of its being taken for such another Romance as *Robinson Crusoe*;<sup>\*</sup> but whoever expects to find here the fine Inventions of a prolific Brain will be deceiv'd; for so far as every Body concern'd in the Publication knows, it is nothing else but a plain, *honest Narrative of Matter of Fact*.<sup>†</sup>

The Original was wrote by *Robert Drury*, which consisting of eight Quires in *Folio*, each of near an hundred Pages, it was necessary to contract it, and put it in a more agreeable Method: But he constantly attended the Transcriber, and also the Printer, so that the utmost Care has been taken to be well inform'd of every dubious, strange, and intricate Circumstance. And as to the large Proportion of Credit which we give him, it will be found not to arise from an implicit Faith, for every Thing he might think proper to relate; but from the strong Proof the Matters related receive by concurring Testimony, and the Nature of *the Thing*."<sup>‡</sup>

<sup>1720</sup>so. Among the ministers educated at Newington Green, where Defoe was educated, he mentions a Mr. Timothy Cruso.

<sup>†</sup>so italics in these places are Capt. Oliver's, and are not in the first edition.—ED. (J.S.)

## CRUSOE (2nd Volume).

"THE Success the former Part of this Work has met with in the World, has yet been no other than is acknowledged to be due to the Surprising Variety of the Subject, and to the agreeable Manner of the Performance. All the Endeavours of curious People to reproach it with being a Romance, to search it for Errors in Geography, Inconsistency in the Relation, and Contradictions in the Fact, have proved abortive, and as impotent as malicious. The just Application of every Incident, the religious and useful Inferences drawn from every Part, are so many Testimonies to the good Design of making it publick; and must legitimate all the Part that may be call'd Invention or Parable in the Story. The Second Part, if the Editor's opinion may pass, is (contrary to the Usage of Second Parts.) every Way as entertaining as the First, contains as strange and surprising Incidents, and as great a Variety of them; nor is the Application less serious, or suitable; and doubtless will, to the sober, as well as ingenious Reader, be every way as profitable and diverting; and this makes the abridging this Work as scandalous, as it is knavish and ridiculous, seeing while to shorten the Book, that they may seem to reduce the Value, they strip it of all those *Reflections*, as well religious as moral, which are not only the greatest Beauties of the Work, but are calculated for the infinite Advantage of the Reader. By this they leave the Work naked of its brightest Ornaments; and if they would, at the same Time pretend, that the Author has supply'd the Story out of his Invention, they take from it the Improvement, which alone recommends that Invention to wise and good Men."

## DRURY.

.... "The Account here given of the Religion of these People, may be thought by some to be invented by the Transcriber to serve an End, or Inclination of his own; but so far is this from being the Case, that the most to-be-suspected Part of the Account of this Religion is Fact, as related by *Drury*;..... and were more strongly confirm'd with Additions of the same Nature, on strictly examining and interrogating the Author; whose Character and Circumstances are also to be consider'd, as that he was but 14 Years of Age when he embark'd on this unfortunate Voyage, his being educated at a *Grammar-School* and in the *Religion of the Establish'd Church*; that ever since he came home he has firmly adher'd to the same, even to *Bigotry*; so that it wou'd be a Weakness to imagine he was able or willing to invent any such Thing, which might favour *Free-thinking*, or *Natural Religion*, in Opposition to *Reveal'd*; since they were Matters he scarce ever troubl'd himself to enquire after. And in all those Places where *Religion* is touch'd on, or the *Original of Government*, the Transcriber is only answerable for putting some *Reflections* in the Author's Mouth, which as it is the only Artifice here us'd, he makes no Scruple to own, and confess that he cou'd not pass such remarkable and agreeable Topicks without making proper *Applications*,\* and taking useful *Instructions*\* from them; yet the Love of these Subjects has not induc'd the Transcriber to alter any Facts, or add any Fiction of his own; Mr. *Drury* must answer for every Occurrence, the Character of every Person, his Conversation or Business with them."

In both prefaces we find the religious "*Reflections*" and "*Applications*" recommended for the "*Instruction*" of the reader; and the "*Thing*" in both instances is insisted upon as a just

\* Here again, the italics are not in the original edition.—ED. (J.S.)

history or honest narrative of "*Matter of Fact*." When an author insists so strenuously on the credibility of his relation, his readers are apt to suspect his veracity.

M. Emile Blanchard in the *Revue des Deux Mondes* (1872), speaking of *Robert Drury's Journal*, writes:—

"Robert Drury, racheté après quinze ans de servitude, retourna en Angleterre. Le récit de ses aventures, qui a été publié, produisit une vive sensation chez nos voisins d'outre Manche. La véracité du narrateur a été affirmée; pourtant, à quelques égards, le doute est légitime. Drury prétend qu'il était esclave. Un Européen réduit en esclavage! c'est impossible, disent ceux qui connaissent les Malgaches; on tue l'Européen peut-être, on ne le place jamais dans une condition infime"....."Le prétendu esclave nous entretient en particulier de son genre de vie près du maître."

According to a manuscript pencil note inserted after the preface of the copy of *Drury's Journal* now before me, "Drury was a 'Porter at the India House' (*Hughes' Letters*; 2nd ed., London: 1773; vol. iii. p. 88): this pretended *Journal* of his is clearly for most part a fiction, probably by Defoe."

Mr. Knowles has pointed out, in *Notes and Queries*, and the writer has lately drawn attention to, the source whence Swift drew his nautical information in his description of the storm in the voyage to Brobdingnag; in like manner I think that M. Blanchard has indicated the source of the descriptions of the Malagasy as depicted by the author of *Robert Drury's Journal*. He says:—

"Les procédés de la guerre chez les Malgaches, dont Flaubert nous a instruits, sont décrits dans tous les détails par Robert Drury."

"Dans la contrée où demeura Drury, les coutumes, le genre de vie, les superstitions, ressemblent à ce que l'on a vu dans le pays autrefois habité par les Français. La confiance dans les '*olis*' est pareille, les '*ombiasses*' entretiennent les mêmes idées; le jeune captif anglais a rencontré un de ces hommes qui venait de la province d'Anossi."

"We know," says Mr. Lee, speaking of Defoe, "by the catalogue of his own library, that it was well stored with '*Voyages and Travels*.' His actual experience of the sea was small; and it must have been from books and men that he gathered the professionalities so skilfully converted by his genius into a series of imaginary voyages." Now the author of *Drury's Journal* undoubtedly had access to a standard French work, and I am curious to know whether such a book existed in Defoe's library, of which I have not seen the cata-



logue. It is *Histoire de la Grande Isle de Madagascar, composée par le Sieur de Flacourt*, and dated 1661.

How do I know, at first glance, that 'Drury' had access to this work? For the simple reason that he has adopted Flacourt's map, merely translating a few of the references, as, for instance:—In Flacourt's map, constructed in 1657, a tract of country marked "*Pays riche en bestial*" appears in Drury's map of 1729 as "A country inrich'd with cattle;" and so, further south, "*Pays très fertile Abandonné et ruiné par les guerres*" appears as "A fruitfull Country abandon'd & ruin'd by the Wars." The spot where the *Degrave* was cast away, and the track of the Author's 'Travells' are each carefully marked through those portions of the map unknown to the French authors.

In 1666, Charpentier published his *Histoire de l'établissement de la Compagnie Francoise*; and in 1668, M. Souchu de Rennefort published *Relation du premier voyage de la Compagnie des Indes Orientales en l'Isle de Madagascar ou Dauphine*; so there was abundance of material available.

The Rev. J. Richardson, of the London Missionary Society, places implicit faith in Drury's Vocabulary. He writes, in the firm conviction that Drury's narrative is unimpeachable, that after he had been in Bétsiléa for a year, he "began to think that the language there spoken originally, while perhaps springing from a common stock, was totally different from that spoken by the Hova." He says: "I changed my opinion, however, before I left; and the perusal of Robert Drury's book, but more especially the Vocabulary, has quite convinced me that the language has really been one all over the island.

"I do not know that I have read anything about Madagascar that has given me such pleasure, and has set me off thinking so much, as has this Vocabulary of Drury. . . . In going through this Vocabulary I have come to the conclusion that Drury himself did not write it, in fact *could not, but that it was written from dictation*. Drury was only 14 years of age when he left England. From his eleventh year he had desired to go to sea, and thus being restless, it is likely he would not be well educated. Then he was 14 years in captivity and associated only with sailors for another 14 years or so before his Adventures were written. Thus we might call him an uneducated man. The Vocabulary, however, is written with care, and we can see evidence of method and rule in all the words. Let us remember too, *that he was a cockney*; hence that ever recurring *r*." (ANNUAL, 1875; p. 99.) Mr. Richardson gives Drury's Malagasy Vocabulary in full, with the modern Hova equivalents, and remarks on the differences.

To my mind, the "evidence of method and rule" in preparing all these words given in the Vocabulary is clear, but it is also conclusive that the words were transformed deliberately from a French vocabulary to adapt them to the pronunciation which a supposed 'cockney' tongue might be supposed to give. This is merely a suggestion. The preface distinctly says the work was written by the author and merely abridged and transcribed by the editor, who remains anonymous.

No ethnologist or philologist would dream of quoting *Robinson Crusoe* as an original authority, so I must protest against *Robert Drury's Journal* being accepted as an unimpeachable record of language and manners in West Madagascar, one hundred and eighty years ago. As to the veracity of the *soi-disant* Drury, take the following passages :—

"THE only Good which I got at *Bengall* was, that I here learnt to swim, and I attain'd to be so great a Proficient in swimming that it was a common Practice for half a dozen of us to tye a *Rupée* apiece in an Handkerchief about our Middles, and swim four or five Miles up or down the River; and when we came on Shoar, the *Gentees* or *Moors* would lend us Cloaths to put on while we staid; thus we us'd to sit and regale ourselves for a few Hours with Arrack Punch and a Dinner, and then swim back again" (p. 8).

"IT vex'd me to be stopt by a River, not above an hundred Yards over. At length, I remembred when I was at *Bengall*, where are the largest *Alligators* in the World, and who have been so bold, as to take a Man out of a shallow Boat; that if we came off from the Shore in the Night, we made a small Fire at the Head, and another at the Stern of the Boat, which the *Alligator* would not come near" (p. 301).

Yet this was where he was accustomed, as a common practice, to swim five miles up or down and five miles back, total ten miles, to dinner! Drury may be a good authority on swimming and crocodiles, but his editor must have sought and found more credible accounts of Madagascar on the shelves of his well-stocked library.

Since writing the foregoing paragraphs I have noticed another mannerism, which seems to give additional reason for arriving at the conclusion that either the editor of *Captain Singleton* and the editor of *Robert Drury* were one and the same person, or that the editor of the latter aped the style of the former considerably :—

## CAPTAIN SINGLETON.

"But the case in short was this: Captain—(I forbear his name at present, for a particular reason), Captain of the East India merchant-ship bound afterwards for China" (p. 154).

## ROBERT DRURY.

... "and sent such Word to the Captain (whose Name I must not declare, being sworn to the contrary), desiring me to go on Shoar" (p. 17).

In the description of the After-voyage of Robert Drury in 1719, it is noticeable that he is made to say that Tulea, a good harbour, is well described in the *Waggoner*. This, I take it, means some current book of sailing directions, and from it the technical description of various parts of the coast has evidently been taken.

Robert Drury also states, or, rather, his editor states for him: "I have read the *Atlas Geographicus*, and suppose it to be a Collection of all that has been wrote of this Island. And notwithstanding I find some Things there mention'd of which I give no Account, I see no Reason to depart from any Thing herein contain'd, nor to add any Thing to it; I relate only what I saw, and knew myself."

I have before me a map purporting to be *Ancienne Carte Topographique de l'Isle de Madagascar. Reduite d'après le Dessin Original, de M. Robert, fait en 1727*. This is in a copy of Rochon's *Voyage à Madagascar*,\* which was not published until 1791, but it indicates the existence of a map in 1727, in which we find the names of various *Dians* mentioned by Drury, and to which his editor, it appears to me, can have had access. Is it not remarkable that the names of these *Dians* should be marked in Robert's map of 1727, and not in the maps taken from Flacourt, illustrating Robert Drury's narrative in 1729 and 1731?

S. P. OLIVER.



[I am indebted for the preceding paper to the kindness of my friend Dr. Rost, Ph.D., of the India Office, who, with the author's permission, sent me the MS., together with the following additional particulars in confirmation of his theory, in a note from Captain Oliver to Dr. Rost.

Writing from Gosport, under date March 9th, 1885, Captain Oliver says:—

"My dear Dr. Rost,

"Since writing to you *in re* 'Robert Drury,' I have found that the author of the narrative has taken the description of the rite of circumcision from Flacourt's work (1661). Flacourt also relates the stories of two wrecks on the south coast of Madagascar, in 1618, in both of which are episodes strangely resembling Drury's story, which is said to have occurred a hundred years after. A young man named Pitre is shipwrecked and falls into the hands of a chief, and another chief purchases him, he spends several years in a species of captivity with the Malagasy, is given a Malagasy wife, etc. etc.

\* Curiously enough, Rochon, who wrote in Mauritius, does not allude to Robert Drury's history, which, it may be supposed, would be notorious at Isle de Mascaregne, where Captain Mackett, his deliverer, traded in 1719.

"Rochon also describes a man, named 'Robert,' who was captured by the pirates and lived several years in Madagascar. Drury's narrative was published in 1729. Robert's map was published in 1727. M. de Malesherbe gave Robert's MSS. and MS. map to Abbé Rochon (date not mentioned), and the map was dedicated in 1725 to the Duc de Chaulnes.

"Mr. J. Richardson, in his notes on Drury's Vocabulary, says: 'His untrained ear would prevent him from detecting the *r* in *andriana*, and he would very likely pronounce it *dean*,\* and down goes *dea*, and doubtless another *an* to make up *drian*; doubtless the word stands for *andriana*.' (ANT. ANN. 1875; p. 99.)

"In Flacourt (1661) the words *Andrian* and *Dian* are used throughout in their proper sense, and doubtless the author of *Drury* got his *Dean* from the French *Dian*, etc.

"Excuse this hurried note. I am trying to get a publisher to print an edition of *Robert Drury*, to which I should like to write an introduction and make annotations beneath the original text. I can show some curious parallels. My idea is that Drury had made a voyage or two to Madagascar, had been *among*, if not *of*, the pirates; and that his brains were picked by Defoe or one of his contemporaries, who based the imaginary captivity of Drury on the stories in Flacourt and other writers. The map is Flacourt's, *certainly*. The religious interludes and preface are uncommonly like Defoe's method of preaching moralities, etc.

"Is there any book in your Library giving 'Sailing Instructions,' or such like, to the East Indies between 1650—1720, which describes the coasts of Madagascar?

"Believe me,

"Yours faithfully,

"S. P. OLIVER."

Dr Rost has also forwarded me, with leave to publish it, the following letter from the Registrar and Superintendent of Records at the India Office, in reply to enquiries made by Captain Oliver. The particulars here given appear to me rather to confirm than to discredit the genuineness of Drury's narrative.

I will not attempt in a mere note to discuss the theory here put forward so ingeniously by Captain Oliver. I cannot say that the points he has advanced—although well worthy of attention, and probably throwing light upon the manner in which the book was written,—have convinced me that it is not, on the whole, a genuine production and substantially accurate and reliable. The subject, however, could not be properly discussed without a careful examination of Flacourt and other early books on Madagascar, and a detailed comparison of them with Drury's work; and this I cannot attempt in the present number of the ANNUAL. But I hope that in a future number some one will go thoroughly into the subject and favour the Editors with the result of his enquiries. Meanwhile, I should rest content with the Scottish form of verdict, "Not proven."

JAMES SIBREE, JUN. (ED.)]

\* In the first edition of *Drury's Journal* this word is uniformly spelt '*Deean*.'—ED. (J.S.)

"India Office, S.W.

"26th January, 1885.

"Sir,

"I am directed to acknowledge the receipt of your letter of the 4th December, 1884, making certain enquiries regarding *Robert Drury's Journal* and some of the vessels named therein.

"In reply I am to state that, in the opinion of Dr. Rost, the Librarian to this Office, the names of people, places, etc., given throughout Robert Drury's narrative and in his Vocabulary represent, with very few exceptions, true and genuine Malagasy words, which could neither have been forged nor taken from the few vocabularies (French, Dutch and German) previously published. This would appear to indicate that Drury really visited Madagascar, as he states.

"With regard to the ships, etc., named by him, it should be borne in mind that prior to 1702 there existed two East India Companies—the Old or London Company, and the New English Company. The former had no such ship as the *De Grave*, nor any commander named Young or Younge, but the New Company had the *De Grave* as one of the first three vessels they sent to India. The United Company had no vessel named *Drake* prior to 1721, in which year a vessel of that name sailed, on 17th June, from Portsmouth, under Commander W. Whitaker, for St. Helena\* and Bencoolen, returning home on 8th June, 1723. The first commander named William Mackett, employed by the United Company, commanded the *Nightingale* on a voyage to Fort St. George, 1721—3. The United Company had no vessel *Sarah*, nor a Commander Bloom in their service, but, prior to the amalgamation in 1702, there was a ship *Sarah* in the employ of the New or English Company. There was no *Prince of Wales* in the employ of the United Company, but the *Princess of Wales*, commanded by Captain Wm. Mackett, is probably the ship meant. The United Company had neither a *Mercury* nor a *Henry* in their service, neither had they a Commander White or Harvey, but a *Mercury* and a *Henry* sailed for the East Indies in 1715 and 1716 respectively, and it is possible that these vessels may have been specially licensed by the East India Company.

"The Admiralty can probably give you any information you require regarding the H.M.S. *Winchelsea* mentioned by Robert Drury. With regard to the alleged trading in slaves by the *Mercury*, I may state that the East India Company's ships never traded in slaves. They occasionally called at the West India Islands on the outward or the return voyage, but never for slaving purposes.

"I am to add that there is no copy of the first edition of *Robert Drury's Journal* in the Library of this Office.

"I am, Sir,

"Your obedient servant,

"G. C. DANVERS,

"Captain S. P. Oliver.

"Registrar and Superintendent of Records."

\* It is noteworthy that a part of the eastern table-land or plateau and headland of St. Helena is called 'Bencoolen,' indicating the former connection between St. Helena and the East India trade.—S.P.O.

## ELEMENTARY EDUCATION IN MADAGASCAR.

EVER since the invention of printing and the multiplication of books thereby, elementary education has spread in ever-widening circles. All who have desired to teach, to inform, and to enlighten, have hastened to bring the printing press into their service, and to supplement and complement their oral teaching with the printed book. This is especially true of members of the Church of Christ, who claim to hold, either as individuals or as corporations, a divine commission to teach all peoples and people of all classes what they regard as the highest and most important truths. But a nexus is required between the printed book and the many who are desired to use it; and this is found in the extension and diffusion of elementary education, thus making attainable to the many the arts of reading and writing and some training in thinking and feeling. In all countries attempts to propagate Christianity have extended elementary education; in some countries they have founded it. Madagascar is one of these latter, in which elementary education has risen and progressed concurrently with Christianity. The first missionaries of the Cross in Madagascar were Christians of the Roman communion, who, in the seventeenth century, settled with military colonists from Europe at several points on the coast; but of their labours there seem to be no traceable results save a few specimens of their catechisms, in which Malagasy words appear in a very imperfect and almost unrecognizable form.

*First Period: 1820-1836.* The arrival at Antananarivo of the Rev. D. Jones, of the London Missionary Society, on Oct. 3rd, 1820, is the real starting-point of Christian missions and elementary education in Madagascar. At that time the Malagasy language may be said to have been but a 'tongue.' Mr. Jones says that he could not find more than six persons who wrote Malagasy words in Arabic characters. Doubtless in the province of Mâtitanana, among the descendants of the Arab settlers of some centuries ago, there were many who could so write Malagasy words; but these literates seem to have had no desire to impart the art of writing to natives; it seems rather that they jealously kept it to themselves as a means of power and distinction. Very shortly after Mr. Jones's arrival he began a school at Ifidirana (near the spot on which the Prime Minister's house now stands) with three scholars placed by King Radama I. under his care. These three scholars were Rakoto (son of the

king's sister), Rahàrolàhy, and Ramahaoly (better known as Rainifiringa). The two latter became successively governors of Tamatave.

Another school was begun at Ambòdin' Andohàlo, with sixteen scholars, by the Rev. D. Griffiths in the following year, and a third by the Rev. J. Jeffreys at Ambòhimitsimbina, with twelve scholars, in 1822.

A few months subsequently the missionaries abandoned teaching in English and adopted the vernacular. From this time till they set up the first printing press at Ambàtonakànga in 1826, they were obliged to use manuscript reading lessons in teaching their scholars to read. In 1824 the three schools were united in one central school at Ambodin'Andohalo, and the Madagascar Missionary School Society, comprising natives and Europeans, was formed to promote the extension of schools to the principal villages in Imèrina. This School Society established a repository at Imarivolànitra for the sale of school materials and other contributions in kind. Twelve or thirteen village schools were formed soon after, and by March, 1826, as shown in the School Society's Report, the following were the total returns :—

No. of Schools	30	No. of Teachers	30
„ „ Scholars	2051	„ „ Assistants	36
Average Attendance	1705	„ „ Monitors	258

From the report of expenditure it appears that the average cost of these schools was 3s. 3d. per scholar in average attendance. Among the places at which schools were established were the following : Ambòhimanàrina, Anòsizàto, Anjànahàry, Alasòra, Ambàtomànga, Tslafàhy, Ihàranandriana, Ambòhidratrimo, Ambàtolàmpy, Soàvinimèrina, Ampanànina, Antòngona, Antsàhadlnta, Fènoarivo, Ambòhimànga, Ilàfy, Bètsizaraina, Ambòatàny, Namèhana, Mèrimandròso, Ambòhidrabiby, Ambòhimalàza, and Ambòhimànambòla. Of the teachers who were then engaged in these schools, Rainisòà Ràtsimandisa is probably the sole survivor ; among those of them who have more recently passed away, Rainifiringa, Governor of Tamatave, Ràtsilainga, pastor of Antsàmpanimahàzo, and Rainimamònjisòà, pastor of Anàlakèly, will be best known and remembered. From 1826 to 1832 the number of scholars seems to have increased but slowly. Returns made in 1828 and 1832 give the following totals :—

1828.	No. of Schools	38	No. of Teachers	44
	„ „ Scholars	2309	„ „ Assistants	46
	Average Attendance	1449		
1832.	No. of Schools about	60		
	„ „ Scholars „	2500		

It is quite clear that King Radama's authority and, from 1828, that of his successor alone secured most of these scholars. At first the people feared to commit their children to foreigners, whom they connected with the foreign slave dealers, and whom they suspected of cannibalism; and probably after they had discovered that their fears on this score were groundless, their suspicions as to the intentions of their Sovereign were almost as formidable. So great was the aversion of some to the education of their children that they hid them in rice-pits, where some were smothered, rather than produce them to be taught; others bought slave children and caused them to personate their own children in attending school, thus in part leading to a prohibition against the teaching of slaves. One minor cause of parents' dislike to their children entering the schools, and one which has prevailed even till now, was the difficulty and uncertainty of getting their children freed from attending school at a reasonable age. King Radama, and Malagasy governments in later times, have alike sought, though without avowing it, in patronizing and promoting schools, to strengthen their hold on the most serviceable and capable of their subjects; and one can readily perceive that schools, ruled by a government based on *fànompàna* (i.e. forced and unpaid service), might, to many of the people, assume the aspect of a new means of oppression. That this was felt by the first missionaries as early as 1828 is shown by the following quotation from the report of the School Society for that year:—

“In order to obviate or lessen the prejudices cherished by some of the parents, who reluctantly allow their children to attend the schools, or to continue long in them, a general regulation has been formed that, as soon as scholars are able to read with facility, to write a good legible hand, to repeat the whole of the catechisms, and have advanced in arithmetic through the rules of fellowship and proportion, they shall be at liberty to be withdrawn, and their vacancies filled up by new pupils. The competency of the scholars to leave is determined by the missionaries at the monthly examinations.”

Statistics of the schools for 1833-1835 are missing, but we are informed by Messrs. Freeman and Johns, in their *Narrative of the Persecution*, that “the number of schools increased until they amounted to nearly 100, containing nominally about 4000 scholars, to whom were imparted the elements of instruction and of religious truth. Probably some 10,000 to 15,000 altogether passed through the mission schools during the period under review” (1820-1835). Reading primers, catechisms, tracts, hymn-books, and portions of the Scriptures were largely



produced and distributed among the scholars. With what importance elementary education was regarded, and how necessary to its advancement the supervision of the missionary was deemed to be, will appear from the following extract from a letter written by the missionaries on March 3rd, 1828: "These [country] schools require in so early a stage of their existence the most vigilant attention and superintendence on our part. Unless they be regularly visited, the expenses incurred in their formation and support would be wasted. The name of a school might indeed continue for a time, but any solid improvement in the scholars could not reasonably be expected. We are either efficient or not as the schools are encouraged and supported. Even the translation and printing of the Scriptures would be in vain, unless there are readers; and readers can only be obtained in the schools. To which we may add that without the schools we have not even hearers. In brief, without schools we labour, translate, print, and preach in vain. With them we are indulging the pleasing hope that extensive good is springing up."

Some of the missionaries, however, after their departure from the island in 1836, and after persecution had tested the value of their labours, seem to have entertained a suspicion, if not a conviction, that they had devoted themselves somewhat too exclusively to the teaching of the young. They mention two facts as tending to sustain this view: one was "that the majority of natives converted to a profession of the Gospel, so as to afford credible evidence of genuine faith and repentance, consisted of *adults not trained up in the mission schools*, but impressed by the preaching of the Gospel, or by conversation with those who through grace had believed;" the other was "that most of those who embraced the truth *voluntarily and immediately commenced learning to read*, however much engaged in secular business, or however much advanced in life."

That greater spiritual results did not follow the teaching of the young may to us now find a sufficient explanation in the fact that the majority of the parents of the scholars disliked and distrusted the schools, and that their influence over their children would probably largely counteract the influence and teaching of the school. As then, so now, it seems to the writer that the most strenuous and systematic efforts to train the young will often be disappointing unless by persevering kindly labours among their parents, their good-will towards, and confidence in, the schools can be secured.

On the departure of the missionaries in 1836, and the outbreak of the Queen's hostility to Christianity, all schools were

broken up; and from that date to the re-establishment of missions in 1862, whatever teaching was carried on was secret and domiciliary. The Government required that all the books which had been distributed by the missionaries should be given up, and very many were thus removed from the hands of the people. One result of the scarcity of books that followed was, that the missionaries found on their return in 1862 that many more persons could read from manuscript than from printed books. In reviewing the work of elementary education as it was carried on during this first period of missionary labours, the principal facts to which one is disposed to give prominence are :—

1. That although Arabic characters had been introduced and used in writing Malagasy speech, their use was so limited that the first English missionaries had practically a clear field in which to introduce the Roman characters. They were able, in conjunction with King Radama, to settle for all time that in these characters the vernacular speech should be written; and not only so, but they determined the use of these characters by a phonetic principle, giving to every consonantal and vowel sound, with perhaps two exceptions, its own proper letter. The importance of this to the work of elementary education can scarcely be over-estimated by those who know the comparative difficulty and facility with which English children and Malagasy children respectively learn to read and write in their own tongue. e/

2. The scholars were provided and their attendance supervised by government authority after a capricious fashion, with scarcely any deference to the wishes of the parents; and the cost of the schools was borne by the mission aided by voluntary contributions. Such was probably the best possible way of doing the work that was done, but precedents were thereby established which, in this later period of missionary effort, can only with great difficulty be departed from.

3. The work of elementary education was almost entirely confined to Antananarivo and about a hundred villages within a circle of 20 miles' radius.

*Second Period: 1862-1868.* This opens with the arrival and settlement of missionaries of the L. M. S. at Antananarivo in August and September, 1862. Among these was a trained schoolmaster, Mr. C. H. Stagg, who soon opened a school in a wooden building at Ambodin' Andohalo, on the spot where a central school was first formed in 1824.

Jesuit missionaries also arrived at Antananarivo the same year and started schools; a missionary of the Society for the Propagation of the Gospel commenced work at Tamatave in August, 1864; missionaries of the Church Missionary Society

established two stations on the east coast at Vòhimàro (Nov. 1864) and Andòvorànto (Nov. 1866); the Norwegian Missionary Society started its mission at Betàfo in North Bètsilèo in 1867; and the Friends' Foreign Mission Association in the same year commenced educational work in Antananarivo in close co-operation with the London Missionary Society.

During this period the missionaries received no help from the native Government in establishing schools or securing scholars; under the Government of Radama II. they enjoyed liberty in the pursuit of their labours, and toleration under the Government of Queen Ràsohèrina. Schools were only established where there were people who wished to have them, and the scholars were children whose parents desired them to be taught.

The following statistics for this period are taken from *A Brief Review of the L. M. S. Mission in Madagascar. From 1861 to 1870*:—

	1863	1864	1866	1867	1868
No. of Schools	7	7	20	18	28
No. of Scholars	365	576	936	811	1735

The journey of Queen Rasoherina to the east coast in 1867 was doubtless the cause of the temporary decrease in that year. More would probably have been done by the L. M. S. Missionaries in organising and superintending schools and in training teachers during these years but for the early death of Mr. Stagg in February, 1864. From that time till 1870 the work of training teachers was practically in abeyance.

*Third Period*: from 1869 to the present time. A decided change in the policy of the rulers of Madagascar towards Christianity, as indicated by a series of very interesting events with which most readers of this magazine are familiar, serves as a suitable starting-point for this period. In September, 1869, it became evident to the people of Imerina that their rulers had publicly renounced the idols and were favourably disposed to the extension of Christianity; and this very naturally caused a change in the disposition of most of the people towards it,—from being indifferent, if not hostile, they became inquisitive.

Towards the close of 1869 about 120 natives were sent out from the Christian congregations in Antananarivo to various parts of Imerina to teach what they could of the *Fivavàhana* ('the Praying'). These men started schools and gathered the children into them; and by the close of 1870, as the result of the combined efforts of the foreign missionaries and the native Christians, the number of schools in Imerina had risen from 28

to 359, and the number of scholars from 1735 to 15,837. Such a large numerical increase in less than two years was made possible by the change of policy mentioned above, and is sufficient justification for regarding it as inaugurating a new period in the history of elementary education in this country.

The following is a resumé of circumstances which have all contributed more or less to the great progress, either in quantity or quality or in both, which elementary education has made from 1870 to the present time :—

(a) Settlement of missionaries of the London Mission, of the Jesuits, and of the Norwegian Mission, in South Betsileo. (b) Increase of missionaries of the London Mission, of the Friends' Mission, and of the Jesuits, in Imerina. (c) Settlement of missionaries of the Society for the Propagation of the Gospel in Imerina. (d) Settlement of missionaries of the London Mission in Antsihanaka and Ibóina. (e) Training and settlement in various parts of the country of native evangelists or catechists and school teachers. (f) The steps taken by missionaries of various societies, and notably those of the London and the Friends' Missions, to organise their work in elementary education and provide for effective examination of the schools. (g) The spasmodic and irregular, but well-meant, efforts of the Malagasy Government and officials, by proclamations and speeches and by the registration of scholars, to advance elementary education.

Some may be disposed to question whether elementary education has been advanced by missionaries of any one society invading a part of the country previously occupied by another, and competing with them for the education of the children. It will be seen that I have answered the question affirmatively, but I have no desire to emphasise the affirmation, as I am well aware that competition among foreign missionaries tends to retard the progress of the people towards independence and self-help. None can doubt that the action of the Government and its officials, stimulated by the growth of sentiments favourable to education among the most advanced of the people, has, more than anything else, prepared the way for the great extension of elementary education during the past sixteen years. But this alone would have accomplished little in the absence of the organised work which has been carried on by the various missionary societies within the same period. This organised work divides itself under five heads :—(a) Direct teaching of the missionaries. (b) Training of school teachers. (c) Contribution of the greater portion of the teachers' salaries. (d)

Superintendence and examination of the schools. (e) Preparation and publication of school books.

The action of the Government and its officials has hitherto been confined to the enrolment of scholars, the exertion of an irregular and intermittent pressure on the parents to send their children to school, the expression on various public occasions of the favour with which it regards the educational movement, and the freeing of school teachers from *fanompoana*.

The Government has not aided in building a single school-house, in training teachers, or in supporting schools; nor has it made any arrangements for raising funds for school purposes by local action of any kind. This statement is not to be understood as implying that the writer thinks the Government should or could have done any of these things. Its hands are often tied from effecting good, possibly mischief also, by the system of *fanompoana* on which it is based. I distinguish between the action of the Government and the personal interest of the Queen of Madagascar and her Prime Minister in elementary education. The latter finds expression in large contributions to the Palace Church, which supports about a dozen evangelists and school teachers at various centres in Imerina.

Nearly five years ago a new Code of Laws appeared, in which a section was devoted to "Laws relating to Schools in Imerina." I herewith give a summary of the provisions of this section, and after each I state how far these enactments have become operative.

(a) That all children between eight and sixteen years of age shall attend some school, and shall be registered by duly appointed government officers.

(The latter part has been very fairly carried out once, but no effective means is employed to secure the registration of children as soon as they reach school age.)

(b) That any parent or guardian failing to comply with this law shall be fined one dollar, and the child be compelled to attend school.

(No attempt has been made to carry this out in a single instance.)

(c) That, in the first instance, the parents or guardians shall have free choice of the school in which they wish their children to learn, but that afterwards the children shall not be removed to another school unless they have passed the examination required by the Government, and due notice shall have been given to the chief officer of education.

(The first clause was fairly carried out in the registration of 1882; the remainder has only been followed in a few instances.)

## ELEMENTARY EDUCATION IN MADAGASCAR. 35

(d) That annual examinations in reading, writing, and arithmetic shall be conducted by officers appointed by the Government, and certificates given to the scholars who pass, by which they shall be freed from compulsory attendance at school.

(This has not yet been attempted.)

(e) That missionaries and evangelists shall be at liberty to examine schools, but shall be required to give previous notice of such examination to the chief officer of education.

(This has been very generally carried out.)

(f) That examination and a government certificate shall be necessary to an appointment as teacher, and that no teacher, duly appointed, shall be at liberty to give up his teaching without the permission of the Government.

(The Government issues certificates to all who are nominated as school teachers, and requires removals and transferences of teachers to be notified to it, but it has not yet undertaken the examination of teachers.)

(g) That in every village where there is a school, a school agent (*masoivodho*, lit. 'eyes behind') shall be appointed to keep an eye on the school and report to the chief officer of education.

(The school agent receives no remuneration, and he finds his own interest better served by maintaining friendly relations with delinquent parents than by informing against them.)

Soon after the promulgation of these laws, officers were sent throughout Imerina to enrol the children of school age, and appoint the school agents. The following numbers are taken from a return made by them in 1882 :—

No. of Schools.	Denomination.	SCHOLARS.		Total no. of Scholars.	TEACHERS.		Total no. of Teachers.	School Agents.
		Male.	Female.		Male.	Female.		
818	London and Friends' } Missions.	53,111	48,984	102,095	2,154	98	2,252	1,169
191	Rom. Catholic	7,323	7,103	14,426	307	67	374	160
41	Anglican ...	1,373	1,044	2,417	64	4	68	36
117	Lutheran .....	13,330	14,253	27,583	187	12	199	127
1,167	Totals .....	75,137	71,384	146,521	2,712	181	2,893	1,492

Of the 146,521 scholars, it was estimated that 22,200 were not such as could be required to attend school, thus leaving 124,321 as the number of children in Imerina who should be attending school.

## 36 ELEMENTARY EDUCATION IN MADAGASCAR.

The enrolment appears to have been carried out impartially; wherever there were schools of various denominations, the parents were allowed freely to choose to which of these their children should be attached. No government returns of the number of scholars enrolled outside Imerina have been published.

Now what proportion of the 124,321 scholars mentioned above were actually attending school in 1884? From very complete statistics published by the L. M. S. and F. F. M. A. it appears that at the examinations conducted by missionaries of these two societies there were present 38,515 scholars, coming from 736 schools, and of these, 17,982 were able at least to read a verse chosen by the examiner from the Gospels. In the absence of similar statistics from the other missionary societies represented here, I measure their corn by this bushel. The result gives for the whole of Imerina :—

Scholars attending school more or less frequently ..... 55,305  
 „ able to read ..... 25,857

It is difficult to estimate with anything like accuracy the extent of elementary education throughout the island; but the following table gives a summary of the materials I have at hand :—

ELEMENTARY SCHOOLS IN MADAGASCAR.

Missions.	Districts.	No. of Schools.	No. on Registers.	No. examined or in attendance.	No. able to read.
London	Imerina . . . .	611*	62,646	31,115*	15,025*
„	Betsileo . . . . .	204	20,683	12,506†	8,877
„	Antsihanaka..	31*	2,900	2,038*	1,207*
„	Tamatave } ..	No	returns.		
„	Mojanga }				
Friends'	Imerina . . . . .	125*	14,355	7,400*	2,957*
Norwegian	Imerina }	207	35,733	29,952†	13,731
„	Betsileo }				
Anglican	Imerina . . . . .	34	1,822	1,057*	600†
„	East coast . . . .	68†	3,644†	2,114†	1,200†
Roman Catholic }	Imerina, }	No	returns.		
	Betsileo, }				
	East coast }				
<i>Totals</i> . . . . .		1280	141,783	86,182	43,597

\* Examined.    † Attending School.    ‡ Estimated.

The population of Imerina is usually estimated at 1,000,000. Speaking roughly, we may say that about one-tenth of the population of Imerina are registered as scholars; rather less than one-half of these are actually attending school; and about one-half of those in attendance are able to read.

The preceding table of elementary schools has been compiled from statistics I have at hand shewing elementary education in connexion with the L.M.S. and F.F.M.A. for the three central provinces of Imerina, Antsihanaka, and Betsileo; but owing to the hostile operations of the French on the east and north-west coasts, mission work has been almost completely disorganised in those parts, and reliable statistics are not forthcoming. The Rev. L. Dahle, superintendent of the Norwegian Mission, has favoured me with statistics of their missions in South-west Imerina and Betsileo; and Bishop Kestell-Cornish, of the Anglican Mission, with statistics of their schools in Imerina and an estimate of others on the east coast. Statistics of the Roman Catholic schools in Imerina and Betsileo and on the east coast are not attainable. Many of these last-mentioned schools, in the absence of the missionaries, have collapsed; many are still being carried on.

To enable readers to form a clearer conception of the character of the schools referred to in the above statistics, the following notes are appended:—

*School Buildings.*—Of buildings solely appropriated to school purposes, the number is very small, and they are only to be found in the Capital and at some of the mission stations. As a rule, the meeting-house for the congregation on the Sunday is the school-house during the week. Most of these buildings away from the Capital are long and rectangular in shape, with walls of *adobe* or mud, and roof of grass, rushes, or poorly burnt tiles. Light and air are admitted through the doorways and two or three large square apertures made in the walls. The interior is by no means calculated to gratify a sense of beauty, the walls in many cases being unplastered, the roof timbers festooned with ancient cobwebs, and the mud floor but partially covered with rush mats.

*Apparatus.*—The apparatus found in the schools is exceedingly meagre,—in most cases nothing more than a few lesson-sheets and the text-books for the teacher's use; in a few, in addition to these, one may see a few desks, a blackboard, and one or two maps. The children usually sit on the floor.

*Course of Instruction.*—This perhaps can be best illustrated by giving the "Standards of Instruction and Examination" adopted by the L. M. S. and F. F. M. A. They are translated here for the benefit of the English reader.



Standards.	Reading.	Writing.	Arithmetic.	Scripture.	Grammar.	Geography.
I.	Reading Primer, pp. 1-6.	Small letters, and words of one syllable from dictation.	The Arabic numerals. To add and subtract orally numbers from 1 to 20.	The Lord's Prayer and the Ten Commandments.		
II.	Reading Primer.	Capital and small letters, and words of two or three syllables from dictation.	Addition and Subtraction of numbers below 10,000.	First Catechism ( <i>Fanadianana ny Tenina Andriamandry</i> ), pp. 1-16.		
III.	First Reading book, pp. 1-20.	A simple sentence read, and then written from dictation a word at a time.	Addition and Subtraction of greater difficulty and the Multiplication Table.	The whole of the First Catechism.		
IV.	First Reading book, or New Testament.—Acts.	Four long lines from TENY SOA, written from dictation, with not more than four mistakes.	The above and Multiplication and Division.	Second Catechism (on Scripture Personages), New Testament portion.	To distinguish the subject and predicate of a simple sentence. To distinguish nouns, adjectives, and verbs.	Boundaries, chief divisions, and towns of Madagascar. The Continents and Oceans, and their relative positions.
V.	To read fairly from TENY SOA (a monthly magazine).	Same as above, written correctly.	Reduction and Addition Subtraction Division of Money.	The whole of the Second Catechism.	To distinguish all the parts of speech in a sentence.	Countries of Europe and chief towns; their position and chief facts concerning them.
VI.	To read well from TENY SOA.	To write correctly from memory any hymn out of six, or any portion of Matt. v. chosen by the examiner.	Simple problems involving the above and a knowledge of Vulgar Fractions.	The Parables and Miracles of our Lord.	The use of the apostrophe, accent, and hyphen. Punctuation. To parse a sentence fully.	The countries and chief towns of the other Continents.

Out of 38,515 children present at examinations based on the above standards, the passes in Standard VI. were :—

Reading, 498 ; Writing, 120 ; Arithmetic, 45.

The largest number of passes were in Standard IV. of Reading, and Standards III. of Writing and Arithmetic.

*Attainments of Teachers.*—Not more than one-sixth of the teachers employed in the schools have had any training ; and concerning the trained teachers it may be safely affirmed that their average ability is rather less than that of a pupil-teacher in his third year of apprenticeship in a public elementary school in England. Of the five-sixths it may just as safely be affirmed that their average ability is not beyond that of Standard V. The Committee of the L. M. S. has lately arranged for examinations for teachers. These examinations are held annually, in December, and are of two grades, each grade being divided into two classes. The minimum attainment for a pass in the lower grade is Standard V. in Reading and Standard IV. in Writing, Arithmetic, and Scripture. The requirements of the upper grade examination are as follows :—

Reading.—Good reading from any book or newspaper chosen by the examiner.

Writing.—To write legibly and clearly an essay, containing not less than 300 words, on some common subject chosen by the examiner.

Arithmetic.—Everything covered by the largest book on arithmetic published here (*Fianara-marika lehibe*).

Scripture.—The two catechisms included in the school standards, and the Gospel by Matthew.

Grammar and Analysis.—Everything covered by the largest book on the subject that has been published here (*Gramara sy Analysisa*).

Geography.—Everything covered by *Geografy Generaly*.

School Management.—Five lectures delivered to students in the Normal School.

Less than a third of the maximum in any one of these subjects, and less than one half of the total maximum, means failure. All who gain two-thirds of the total maximum receive a certificate of the first class ; all who gain from one-half to two-thirds receive a second-class certificate. For honours, provision is made for an examination in English (*First English Lesson book* and *First English Reading book*).

Drawing.—A free-hand drawing from an easy copy or easy model.

Geometry.—Euclid, Book I.

Algebra.—As far as Simple Equations (inclusive).

It will be evident from the whole of the foregoing that, while the goodwill of the Malagasy Government and that of many of the people has presented abundant opportunity for establishing and carrying on the work of elementary instruction, it is to the efforts and labours of the missionary societies that this work owes its origin and chief maintenance. The importance of it in contributing to the accomplishment of the high aims of Christian missions here and to the advancement of civilization and commerce cannot be overrated. It is laying the only satisfactory foundation, a broad and sure one based on the intelligence of the people, for the grand superstructure of national Christianity, enlightened, honest, and liberal government, genuine patriotism, and civilization and commerce. Can Christian missionaries have confidence in any narrower basis on which to raise and to secure the stability of such an edifice?

J. C. THORNE.

~~Signature~~  
Signature

### THE KING IN IMERINA:

#### A DRAMATIC FRAGMENT.

SCENE.—*Place of public assembly in Antananarivo. Great gathering of Imerina clans. Waiting for the King.*

*Enter a Hova of Alasàra, who is recognised by another of Ambòhimànga. The latter rises.*

AM. HOVA.—A welcome, friend, arrived all safe and well!

AL. HOVA.—By heaven's blessing. How are you at home?  
And what's the news across the Mamba now?

AM. HOVA.—We're fairly well, but as for news there's none.  
The wars have ceased; we plant our fields unarmed,  
And sleep without a guard; our cattle feed  
Untended save by children, and our wives  
Might walk a league from home and meet no ill.  
The news has come with you. How fared you south?

AL. HOVA.—Not badly, but there's not much trade just now.  
The King has sent an embassy down there,  
And all the folks are wondering what it bodes.

AM. HOVA.—The Betsileo, you mean?

AL. HOVA.— Yes, why d'you smile?

AM. HOVA.—I'm thinking of a story I once heard  
About that precious tribe.

AL. HOVA.— Let's hear it then,  
And while the time.

AM. HOVA.— My neighbour had a horse;  
He bought it of a white man from Maurice  
And took it from the coast to Betsileo,  
A present for their king. And all the way  
Across the country inland, this old nag  
Received no end of human courtesy;  
The people bowed politely on the road  
And gave it: "How d'you do, Sir?" and "Good  
bye."

[Commotion and amusement near the head of the crowd, which makes  
a way and allows FIRINGA the Fool to pass down the open centre, dancing.]

It's daft old Dunghill.

AL. HOVA.— Well, you nasty name.

FOOL.— 'Twere better yours were Dunghill too.

AL. HOVA.— How so?

FOOL.— You'd have fit place to put your manners in.

AM. HOVA.—You're hit, my friend.

(To Fool)

Firinga, why d'you dance?

FOOL.— To get an appetite.

AL. HOVA.— And why get that?

FOOL.— Because the King will bring tough words to eat,  
And I don't want to have the stomach ache.

[Enter the King and his train of attendants, followed by singers and  
shell blowers. Drums, etc. Assembly rises and makes obeisance.]

ALL.— We hail the King!

KING.— The King is safe and well.

FOOL.— [rising alone after the assembly has reseated itself.]  
A salutation, Master.

[Amusement in the crowd.]

KING.— Why behind,  
Firinga? Surely not from halting heart?

FOOL.— The bucket's up soon in shallow wells, Sire.

KING.— And brings cold drinking when the well is deep.  
Eh! good Firinga?

[Crowd tries to incite Fool to reply.]

SEVERAL.— Answer him again.

AN OFFICER.—*[near the King.]*

The Sovereign says there's room for you up here.

FOOL.— *[Seating himself near the Hova of Alasora and his companion.]*

Pray tell my Master, I'm more snug with fools.

*[Drums and shells. Officers command attention. The King takes a spear and rises to speak.]*

KING.— Attend to me, ye clansmen of the hills,  
For words of mine are ever at your ears,  
And I'm become like one who weeds a field,  
And weeding, often looks to harvest time;  
Imerina is now a multitude,  
And if I show you not the way to go,  
The feet of some will wander, and they'll fall.  
Your duty, therefore, is your summons here,  
And foremost yours, North-Mamba men.  
We'll hear no more the lazy slave's excuse  
Who's bidden go for fuel and replies:  
"I've only just returned from herding kine."  
You shall not dare to vex your neighbours' minds  
With boast of how you made your chieftain King,  
Nor vaunt of having used your heads as shields  
In days when they were captive to our war.  
This land of ours shall know no rival tribes,  
For all are equal when they come to me;  
By great God's gift the kingdom's mine.  
Is't Aye, or No, O mountain Merina?

ALL.— It's Aye!

*[Shells and prolonged native cheers.]*

KING.— And all this isle, mid torrent seas,  
Shall hang around me like a royal robe;  
The west shall send us wild Imenabe,  
Our dawn shall lead the undivided east,  
The boastful south shall climb from Betsileo,  
The north from reedy Hanaka shall stream;  
There's Boina too, they've launched their fleet  
canoes,  
They wait but rising tide, and all the tribes  
Shall each be first-born son to me the King.  
Is't Aye to that, Imerina?

ALL.— It's Aye!

*[Shell-blowing and cheers.]*

KING.— And here shall stand the witness of my words,  
*[A large stone is set up on end in the ground.]*

A witness most oblivious of all fear ;  
 And he who dares to fan our smouldering feuds,  
 Whate'er his rank, whate'er his wealth or fame,  
 Shall hither come, a traitor to his doom.  
 Is't Aye, or No, Imerina ?

ALL. —

It's Aye !

KING. —

And now hear law for me, Imerina.  
 There have been kings who owned none ; they  
     had sons  
 Beloved, and wives beloved, and friends beloved,  
 And favourites seeking favours at their heels ;  
 And these, like hungry hawks from lawless air,  
 Came swooping on the fledglings of your wealth  
 And soared beyond your spears. They would  
     pretend  
 To buy your jewels, robes, your fighting bull,  
 And have them fetched to look at, with the price,  
 But never stooped to pay you or return  
 The treasures which your hearts refused to yield.  
 But that shall cease, Imerina, shall cease ;  
 Yea, though Ralesoka, my sister here,  
 Who's orphaned and yet childless, as you know,  
 Should use her kinship and her precedence  
 To obtain a single real's worth by fraud,  
 I'll make the guilt pay double to your grief.  
 No kite builds here upon our crags with me,  
 For you and I are eagles, and my swoop  
 Shall ne'er leave wailing in the homes of friends.  
 Let every one his eyrie rule in peace,  
 And I upon the topmost rock will guard,  
 Your father and your King.

ALL. —

It's Aye, it's Aye !

[Shells ; drums ; long-continued cheers. Fool leaps up and leads  
 the crowd in a dance of joy.]

W. CLAYTON PICKERSGILL.

## NOTES.

The foregoing "Fragment" is founded upon the first of Andrianampoinimèrina's recorded speeches.

"Waiting for the King."—Andrianampoinimerina, father of Radàma I ; see following paper.

"Alasóra."—One of the ancient royal towns of Imérina, the central province, and situated about four miles to the S.S.E. of Antananarivo.

"Ambôhimànga."—The ancient capital of Imerina, situated about eleven miles north of Antananarivo.

"Màmba."—A small boundary stream which flows about half-way between Antananarivo and Ambôhimanga. The people of the latter town and its neighbourhood are called Avàrà-drino, 'North of the water.'

"Daft old Dunghill."—This is the literal meaning of the word *firinga*, which is, however, frequently used as a personal name among the Malagasy, probably from some idea that an evil-sounding name averts danger from 'the evil eye.'

"Mid torrent seas."—One of the names given to Madagascar in public speeches is *Ny anivon' ny riaka*, 'The (land in the) midst of the seas,' or 'the flood.'

"Iménabé."—A Sakalava province on the western seaboard, formerly one of the two great kingdoms into which the numerous Sakalava tribes were divided, the other being Iboina.

"Undivided east."—The most important tribe on the eastern side of Madagascar is the *Bétsimisàraka*, 'Many not separate.'

"Bétsiléo."—The tribe and district to the south of Imerina. 'Many unconquered' is the meaning of the name. The story told about the tribe is preserved in a Hova proverb which says: *Adaladala toa Bétsileo: miarahaba soavaly!* 'Foolish like the Bétsileo: saluting a horse!'

"Hànaka."—Abbreviated from Antsihànaka, a district which derives its name from extensive *hànaka*, lakes or marshes. It lies about a hundred miles to the north of Imerina, and contains the largest lake in Madagascar, the Alaotra.

"Bóina."—A Sakalava province in the north-west, of which Môjangà is the chief town. It is traversed by the Bétsibôka and many other navigable rivers.

"The witness of my word."—A large slab or block of undressed granite rock was often erected as a memorial of agreements.

"You and I are eagles."—The Hova of Antananarivo are called *Vôromahéry*, the name of a species of falcon (*Falco minor*, Bp.), which is the nearest approach to an eagle known in the interior of Madagascar.

## X TRANSLATION OF THE FAREWELL SPEECH OF ANDRIANAMPOINIMERINA. X

### INTRODUCTION.

ANDRIANAMPOINIMERINA, the father of Radàma I. and founder of the Hova dominion, must have been born between the years 1740 and 1750, as he died in 1810 at the age of 60 or 70. He reigned, according to a MS. list of kings in my possession, 23 years (1787-1810), though Mr. Ellis states that his reign extended from 25 to 35 years. He was a man of great energy and force of character, and made a deep impression upon the minds of the people. Many anecdotes concerning him are current, some of which have been printed in *Tèny Sda* (magazine). A good account of him may be seen in Ellis's *History of Madagascar*, vol. II., pp. 122-128, or in *Ny Tantàran' ny Andriana àto Madagascar* by the Jesuit missionaries. The following speech is one of several\* which were preserved originally by tradition and committed to writing after the arrival of the first missionaries in 1820. Although speeches so transmitted cannot be relied on as being perfectly accurate, there seems little doubt that these are substantially correct. The style of the one here translated differs much from any modern composition, and abounds in phrases and allusions that attest its age. I have tried in my translation to keep as near to the original as possible, even at the risk of making the English somewhat stiff; but of course the archaic colour of the original cannot easily be preserved in a translation. In several places I have departed from the printed text in favour of readings found in a MS. copy which came under my notice after the book of *Kabary* was printed, or have adopted changes suggested by natives. Some of the phrases of the

\* See *Malagasy Kabary* (1873), pp. 1-13; and *Mpanàlo-tsaina*, vol. II., pp. 338-347.

original are hopelessly obscure, and the text cannot be considered free from corruption. Though this speech contains much that may interest any reader, I have been induced to try and translate it chiefly for the sake of those who, in the course of their Malagasy studies, will read the *Kabary* in the original, and who will, I hope, welcome this attempt to put into readable English what may perhaps be considered the most classical example of older Malagasy composition.

TRANSLATION.

THE words spoken by Andrianampòinimerina to Radama, and to his relations, and to all his friends, when he was very ill at Ambòhipò. There were present Andriamahèritsialaintàny, Andriankótonavàlona, Andriamàmbavòla, Andriantsíra, Ralàla, Rainimahày, Andrianasòlo, Andriantsòlo, and Andriantsiambazàha; all the men of weight were there, for all but "the twelve" were summoned to attend. But the words he was in the habit of saying continually to the "twelve" formed the substance of his speech.

"This is what I say to all of you, my relations and friends, for now symptoms of disease have come, for God is taking me away, and that is why I call you together. For now that the command of the Creator hath come, and my days are finished, and I am going home to heaven, behold Ilàhidàma, for he is young; and there too are yourselves; for it is only my flesh that will lie buried, but my spirit and my mind will still remain with you and with Idàma.

"First of all then, my comrades, behold Radama; for I did not beget him, but coughed him out of my mouth; and I did not intend that he should have our kingdom, but it has come to him as a gift from God; and, behold, I commit him to your care, therefore have an eye to him as he goes, and suffer him not to bear shame, lest we should be left without a successor, but offer a *fàditra*\* for him, and remove from him ill omens; for the offering of a *fàditra* is powerful, and ill omens prevent from attaining manly strength. But yet I shall not be far off, but shall whisper to him wherever he may be.

"And in the second place, my comrades, this kingdom of ours had its boundaries fixed by the word of Andriamàsinavàlona, and was left by him with Andriantsimitòviàminandriana and Andriambèlomàsina, and was left by the Twelve Sovereigns with me and with you, and is now left by me with you and Ilahidama; for to secure it I counted my life as nothing, and you exerted yourselves to the utmost; and behold here are all

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\* *Fàditra*, offerings to avert evil.



of you who wrought together with me. There too is Rahòdi-bàto\* as your companion. Therefore you will injure yourselves, my comrades, if you allow Radama to leave me without a worthy successor, and if he will not believe your words; for assuredly the kingdom is not his, but yours; for it was you whose heads were crushed, and whose legs were broken, and who used up the last dregs of your strength, and counted your lives as nothing, in order that I, Iambòasalàma, should possess Besàkana.†

"Again, in the third place, comrades, whatever was your strength, and whatever good deeds you accomplished for me,—for never was there a king stronger or more famous than I (but only thirty, including little children, at Ambòniloha, who went to spy me, were (ever) killed by me‡)—yet if I had not been supported by you, neither war nor counsel would have been been vigorous. But take heed to Ilahiadàma, for if he had been a fool not worthy to succeed me, God would not have given him to us; but it seems he is worthy to be my successor, seeing he has been left by God to be your charge. But this only is my request: let not anything be forbidden him, my comrades; for he is a man both excellent and young and also a sovereign; therefore forbid him not, if there is anything he desires. Take not away the food loved by the child; for he is by no means a fool. But yet I shall not be far away, but shall be always near his side.

"And in the fourth place, comrades, Ilahidama is as a little bird to whom you will give food already prepared; and he will have many matters to think about, but it is you will both do and command. And do not allow Ilahidama to incur guilt; for if the king becomes guilty, the land will become a wilderness§; and do not render him unpopular by actions done by you out of his sight. And take heed, comrades, lest there should be those not guilty of death, or lest there should be those guilty of offences that might be settled by a fine, or by the payment of a very small sum of money, or that might be settled simply by the presentation of *hàsina*,|| and you cry out against them that they, together with their wives and children, should be sold into slavery and should lose all their property. For it is better to have a foolish sovereign

\* Rahodibato was the name of an idol. See *Tantaran' ny Andriana* (1875), p. 60.

† Besakana, the royal palace. See *Hist. of Madagascar*, vol. I. p. 100, and *Tantaran' ny Andriana*, p. 89.

‡ The reference of the above obscure sentence has not, to my knowledge, received any satisfactory explanation.

§ Literally: lest the *vero* should grow tall. The *vero* (*Andropogon hirtus*, L.) is a common grass in certain districts, and often grows to the height of seven or eight feet.

|| *Hasina*, money presented as a token of allegiance.

than foolish councillors; and it is only they who have wise advisers who really reign and are kings that secure peace and prosperity; for it is you, comrades, who will have the control of affairs.

"Again, in addition to that, my comrades, if you love me, take heed to what will be for the good of Idama; and when you remember me, go to him and do to him as you have been wont to do to me. And do not tell him what is untrue or deceive him, for the sovereign has no relations nor any real brothers and sisters, but they who obey his laws and believe his words are his relations. And if there is anything he wishes done which in any way touches the laws of the kingdom, meet together and consult about it, I beg you; for 'a single finger cannot catch a louse,\* and a single tree does not make a forest,' but the thoughts of the many constitute a government; and he will by no means reject true counsel that has been considered by the many; for he is a descendant of (me) the many-eyed bull.

"And yet again, my comrades, take care of his life. Do what will make him reach old age, and what will render him popular with his subjects, that he may possess the whole of the land; but yet what will make him lasting and long-lived is the principal thing, for he who has but a short life has but little sovereignty. This then is what I say to you, my relations and friends, every day, and what I declare in your hearing again at the present time."

And when all the friends of Andrianampoinimerina heard these words, they all sobbed and wept and could make no answer. Then said Andrianampoinimerina: "All of you go home and sleep over these words of mine."

And when they had gone, he sent for Rahàgamainty, and Rahàgafòtsy, and Andriampinòana, and all their companions. And on the following day he summoned them into the presence of his wives and children.

Then he spoke thus: "O Idama, O my first-born; yea, thou crumb of my life, may I die before thee. Thou art not like a man, but like a god fallen (to the earth), and thou wast not begotten by me, but coughed out of my mouth and fashioned by the Creator. I am not dead if I have thee, for I have a splendid bull. My companions are all gone, and I alone remain. And behold thyself, O Idamalahy, for thou art the red wand† always near the bull. And see! only we two are related

\* This proverbial expression, though not in harmony with our taste, is very commonly used, even by preachers, as an illustration of the need of union.

† *Tèhi-mèna*, i.e. the red wand of the keeper. Another reading is *tèha-maina*, pata, such as would be given to the oxen.

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to one another, therefore let me and our ancestors not be without successors, thou crumb of my life ; for this land assuredly belonged to others, but God gave it to us.

"For consider ! those men are a large well-tempered knife : when used in cutting, it does not become blunt ; they are a spear with a well-fitting socket : when hurled at a mark, it will not bend ; they, O comrade, are *Tangèna*\* that has been carefully charged and will not be partial in judging. You will indeed be a man when supported by them.

"First of all, Sire, behold my wives and children ; treat them as the descendants of Andriamasinavalona, and take no treasure from them, for they bore hardships ; show them favour, for you are their glory and protection ; for you will be here as the successor of the Twelve Sovereigns and of myself.

"And again, in the second place, O Idama, do not indulge your relations, or give encouragement to servants ; for if those who are secretly disaffected to you acquire power, the government will be oppressive ; for one's relations are the people who will not show becoming respect, and it is the disposition of slaves to be extravagant.† Let them not be like cattle allowed to stray, for they are both spoil and heritage ; they are like a hundred measures of rice mixed in the store basket, not to be eaten by your wife, nor by your children ; but yet they must be treated like a dog that eats a sheep, and the life must pay the penalty, if they do anything that is not proper in the kingdom. They are the very people who should be made examples of the power of the law, for they are the silver ring of the ancients, and the thick *làmba*,‡ a protection against the morning frost, and a shelter against the sultry wind. They are a couch on which one may recline ; they are an ornament and pride.

"O Idama, I am going home, and I shall leave you as my successor. What wondrous histories you have heard and seen ! How great was my power and my fame ! There is not a mountain I did not climb, nor a hillside on which I did not fight. For God who gave me the land gave it without reserve ; and I to whom He gave it was prospered and received a blessing from my ancestors. For Iamboasalàma was my name, but I gained an increase of people, and§ acquired power here in the middle of the island, and became famous as Andrianampoinimerina.

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\* *Tangena*, the fruit of the *Tanghinia venenifera*, Poir, used in the poison ordeal. See Ellis's *Hist. of Madr.* vol. I. pp. 458—486.

† In the Malagasy there is here a play on the words *andèvo* (slave) and *mandèvo* (consume).

‡ The outer robe wrapping all round the body.

§ *Nampian' ny ambanianandro anarana aho*, 'the people gave me an additional name.'

"I verily swept my courtyard all round before I was free from clatter and confusion. I had my door surrounded by others before I could secure a home for myself. I used up everything, even to the smallest possessions, before I gained friends. I vomited liver and bile before I was able to establish myself firmly. And that was not all, for I had to give the cooked in exchange for the raw before I obtained what was complete; and I bore hardships and ate and drank the blood of unknown beasts.

"O Idama, might is indeed no match for mind, for the sweet is surely found among the bitter; and I count you a fortunate one among kings, being supported by those old bulls. For if you see that they are well supported, you will not want wild cattle.\* For if you had none but them, even if a stone should be bored by them, it would be pierced (for no animal exceeds the crocodile); therefore suffer them not to be overcome whilst in our retinue, and do not permit them to be injured by talebearers; for the way I gained this land was thus: they were a buckler no ball could pierce, and a wooden shield coming between me and the spears. They made their lives of no account in order that I should be king and possess these lands.

"And whatever is to be considered or to be done, in any matter touching the kingdom, send for them to deliberate with you, for they will on no account reject your plans. For let them, if any, be the ones to use a large-eyed needle and tear as they sew; for who but they were bruised and crushed? Therefore they will not dare to deceive you. Let them not be treated as bald-headed men following in the footsteps of others, and let them not be treated as grey-haired men wearily dragging themselves along; for the dead have successors, and the living have shadows; the reason why people have children is that these may become their substitutes; therefore I shall lie down in confidence, O Idama, having you.

"And this also I say to you, O friend (for you are verily a descendant of Ramorabè and a child of Ralèsoka; you are assuredly not of Imàrovàtana, but a genuine Tsimàhafòtsy): Do not act like the *tsingala*,† that knows its own cattle; do not be afraid of correcting your own children; for it would be better even to pretend not to love those that belong to you. But show favour to your chieftains and relations, if they are loyal to you. But yet even those stone locks and wooden

\* The wild cattle will all be his, as they will come and join his herds.

† *Tsingala* are insects found in water and said to cause death if swallowed. Cattle are often killed by swallowing a *tsingala*; but the natives say that only strange cattle are thus poisoned. See ANNUAL, 1884; pp. 22, 23.

‡ Reading *hidry valo sy manda mafy*, instead of the printed text.

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walls,† if they show undue familiarity and say: "I will do it, for it does not matter," and blind-fold you, let them be cut into equal parts and cast down the stream; cut them into small pieces, and give them to the dogs; for I never made any bargain with them, but our relation was simply that of doing good to one another; and let it be rather about other matters that you shew favour, but let not the kingdom be governed with partiality.

"And if, on the contrary, they do not change from what they have done to me, and seek what will render you sole ruler, do not change them, but see that their good deeds are recorded; though they should die in the daytime, let them be alive again by night; for they cast away their lives to make me king here in the midst of the floods.\*

"And this is what I say to you to be attended to by you and to be your charge. For a long time to come this will not be forgotten; after I am gone I shall still be remembered; therefore seek what will consolidate this, and that by which it may grow; for you alone, O Ilahidama, are the protector of the kingdom, and if your way of governing is good, and you do not deviate from the present policy, even though you should not go forth from Ambôhimànga and Antanànarivo, there is nothing that should prevent you from possessing this island; for the name of those guns of mine is 'Not many in the island.'"

And when he went to Ambohipo, this was the chief burden of his talk from day to day, and at Isoàvimàsoàndro too, when his friends and relations were assembled there, or in the presence of Ilahidama and his wives and children, for his disease was at this time clinging to him.

And Andrianampoinimerina said too: "Thou art here, O Idama, representative of the Twelve Sovereigns and of me, and there too are you my companions; see that you do what will make this land strong, that Radama may have his heart's content, that your wives and children may abide in peace; for if the land is spacious, the sovereign obeyed is potent, and reigns so as to have his commands carried out.

"Also let not this land be regarded as the charge of Idama alone, my comrades, for it is difficult to bear the name of an illustrious father, and it is hard to secure the kingdom to the sovereign; suffer not my children to quarrel, for I have given you and have left with Ilahidama my commands and my word; and I now repeat them to you that each one may bear them in mind and treasure them up.

\* "*Anivon' ny riaka*," a name often used by the Malagasy in speaking of the whole island.

"But Ilahidama is not to be imitated by others, he is not to be allowed to be a king incurring blame, he is not to be treated as a master without power to control his own possessions. Ilahidama is not to be treated as if the arum were to be preferred before the banana, or as if the smaller timbers were to be chosen before the corner-posts; he is not to be envied in ruling nor to be checked in reigning, for the land and kingdom is his.

"And this too I say to you, O Ilahidama: Imèrina has been gathered into one, but behold, the sea is the border of my rice ground,\* O Lahidama. And yet behold, Imàvo† shall be mistress of the latter end, O Ilahidama."

These were the words left by Andrianampoinimerina with Ilahidama and with the friends in whom he had confidence.

And Andrianampoinimerina said also to Ilahidama: "When the time of my going home to rest has come, let me be here with father and mother; for you would never know why you should love father and mother, if I were not to be buried at Ambohimanga, lest Ambohimanga should become a deserted place, and there would be no reason for loving the land, if it did not contain the sepulchres of the fathers.

"But when, on the other hand, the time of your going home to rest shall at length come, you shall lie at Antananarivo, to the north of 'the row of seven tombs,'‡ in a line with them, but a little higher."

These were the words spoken by Andrianampoinimerina to Ilahidama.

Translated by WILLIAM E. COUSINS



## NOTES ON THE TRIBES OF MADAGASCAR.

THE ethnology of Madagascar, though a study of much interest, is one that presents many difficulties. A great deal has been written on the subject, but we are not yet in possession of all the material necessary for solving satisfactorily the questions involved in it, if indeed they are capable of a solution. Our knowledge of the dialects of the different tribes, their manners and customs, their traditions and history, is as yet too meagre to be

\* This phrase is a great favourite and appears to have had much influence on the policy of subsequent Hova sovereigns. The whole of Madagascar is often spoken of as "*Ny finari-bavan' Andrianampoinimerina*," "That marked out by the words of Andrianampoinimerina."

† Imavo, the original name of Queen Rànavàlona I.; see *Tantaran' ny Andriana*, p. 11, note.

‡ Lit. 'the seven houses,' i.e. the row of ancient royal tombs within the Palace enclosure, south of the palace called Trànovòla.

of much service in our investigations, or to yield sufficient data upon which to found reliable inferences. But our knowledge of the Malagasy people is growing every year, and together with investigations into the language, the folk-lore, etc., further enquiry might certainly be made into the elements of the Malagasy people and their origin. What I am able to contribute at present is indeed very little, and that little only in the way of suggestions; these, however, may perhaps contain something which other writers, more at liberty to deal fully with the subject, may avail themselves of. I shall first say a few words about the tribal names of the Malagasy and point out some conclusions which may probably be drawn from these names.

I.—The names of the tribes, or what we generally call tribes, of Madagascar are apparently of very different origin. We have several tribal names derived from the nature of the country in which the tribes in question live. Such names, for instance, are *Tanàla* ('inhabitants of the forest'); *Bètanimèna* ('inhabitants of the red land'); *Bèzànozàno* ('the bush-people'); *Antsihànaka* ('the people at the lake'); *Antankàrana* ('the people of the cliffs'); *Antandròy* ('the dwellers among the *roy* shrubs'); *Antanòsy* (the inhabitants of the islands'), so called on account of the small *nòsy* (islands) near the coast-line occupied by them; and *Taimòro* ('inhabitants of the coast'), the *Tai* in this word replaces the general *Tan*, at least this is the explanation I have had given.\* These names are of course not of any service to us in searching for the ethnological divisions of the people, but of mere geographical interest. Then there are some tribal names which seem to be derived from the common employments of the people; e.g. the *Taisàka*, from *misàka* (root *sàka*), to catch with the hand. This name originates, according to the explanation given me by natives, in the custom followed by this tribe of catching small fish, etc., by hand.

Several tribal names in Madagascar, and especially the names of the largest tribes, seem to have sprung from certain old sayings of the people, and are as insignificant with regard to ethnology as they can possibly be. The large tribe on the east coast is called *Bètsimisàraka* ('the many who do not separate'), and the well-known tribe to the south of *Imèrina* is called *Bètsileo* ('the many who are unconquerable'). The name *Betsimisàraka* one would think the tribe had given themselves. As to the *Betsileo*, it is doubtful whether they have given themselves this name, or whether they have got it from others; different opinions are entertained by the people themselves on this point. The derivation of *Sakalava*, the name of the tribe (or, rather, the common name of a great many tribes) inhabiting the western and northern parts of the island, is much disputed. The opinion of some is that it means 'long cats'† (*sàka*, a cat; *làva*, long). If that be its meaning, the name must have been given to them by the *Hova*, who are called by the *Sakalava* *Ambòalàmbo* (*ambàa*, a dog; *làmba*, a boar). According to what I have heard from Mr. Walen and Mr. Lindo, who have lived for some time in the *Sakalava* country, the *Sakalava* themselves say that this explanation of their name originated with their enemies, the *Hova*, and that the right meaning of the word is, 'the inhabitants of the broad and long plain' (*sàka-ny*, the breadth; *làva-ny*, the length). Other explanations are also given (cf. Rev. J. Richardson's *Malagasy-English Dictionary*). But it is easy to see that, whichever explanation we take to be the true one, it does not help us in investigating the origin of the tribe in question. To the south of the *Sakalava* we have the *Mahafaly* tribe (i.e. 'those who cause joy'). How this tribe, the most fierce and bloodthirsty one in the whole of Madagascar, got this name,

\* For another possible meaning of this tribal name, see *ANNUAL*, 1882; p. 28.—EDS.

† The late Dr. Mullens was, we believe, the first and the only writer who broached this idea; see *Twelve Months in Madagascar*, p. 168.—EDS.

I do not know. I should not be at all surprised to find that both the Mahafaly and Sakalava obtained their tribal names from some native corruption of foreign words; the tendency to such corruption is, at any rate, quite strong enough to produce very ludicrous results. Both these names are certainly puzzling.

We have still two large tribes left to be considered, viz. the Hova and the Bâra. As to the word Hova,\* I know nothing whatever as to its original meaning, and it may, for ought I know, point to the origin of the tribe. It must be remembered, however, that the general use of the word among the natives is to denote a special class of the inhabitants of Imerina, not the tribe as a whole. The natives have now become accustomed to the sense of the word in which Europeans generally use it, which is, however, different from their own primary use of it. As a tribe they are called Ambânîlânitra ('those under the sky'), or Ambâniandro ('those under the day').

The explanation of the word Bâra is of a different character. Mr. Dahle, in his Norwegian work on Madagascar,† says that it is derived from the verb *mibâra* or *mibârâbâra*, and compares it with the Greek *barbaros*. Mr. Richardson, in his *Dictionary*, suggests that the word Bâra is the same as the *bar* occurring in *Zanzibar*. I have questioned several of the natives as to the meaning of the word, and they think that it has nothing to do with *mibârâbâra*; this word is given only in its reduplicative form in Mr. Richardson's *Dictionary*, and this, I believe, is correct, as it does not seem to be in use in its primary form. But even if the word Bâra has any connection with *mibârâbâra*, it affords no clue in our search for the origin of the tribe so named, as it seems to be only a nickname given to them by others. If the derivation of the name should be proved to be from the word *bar*, and this word be an East African one, the case would be different, but this seems to me to be very doubtful.

In addition to the tribes above mentioned, which represent the chief divisions of the Malagasy people, there is a tribe in the western part of the island which seems to be only a remnant of a former tribe or nation, and the existence of which at the present time has even been disputed, viz. the Vazimba. As the name of this tribe is found in East Africa (cf. ANNUAL, 1883, p. 23), the name seems to point to the origin of the tribe. Yet various opinions are held on this subject; Mr. Dahle, for instance, says that the Vazimba were "purely African" (ANNUAL, 1883, page 24), whilst the late Dr. MULLENS says that "there is nothing African about them" (*Twelve Months in Madagascar*, page 179). That the Vazimba were an African tribe seems, in my opinion, quite clear. I shall, however, further on come back to this question; in the meantime I shall proceed to make some remarks on what the tribal names in Madagascar seem to teach us.

If we look through these names as already given we shall find that, excepting those of the Hova and the Bâra (which names *may* have something to do with the origin of those tribes), all owe their origin to the kind of country in which the tribes live, their occupations, etc.; and that all are alike in not signifying anything as to the origin of the people (except, of course, the name regarded as a word of a certain language). Not a single one of all these names seems to have been introduced together with the people themselves; for, on the one hand, we can easily explain them on other grounds, and, on the other hand, they have not been shown to have any connection with tribal names in other parts of the world. We have only one exception to this, that of the Vazimba. We find no trace of this name in any Malagasy word now known that will

\* A Hova in Betsileo means a *tômpomênakêly* or an *andriana* (a petty chieftain, or one in possession of a fief). In Imerina it sometimes means 'master,' if used by a slave.—EDS.

† *Madagascar og dets Beboere*; Christiania: 1877.



explain it as being derived from the dwelling-place of the tribe or other local circumstances; but we find among East African tribes names which are very likely connected with it. This difference between the names of the majority of the tribes and the name of the Vazimba is the first point worthy of notice. While the name of the Vazimba seems to point to their having had a different origin from that of the other tribes, the names of all these other tribes seem to indicate tribal divisions more or less akin to each other. I shall first speak of the Vazimba and the other tribes, and then say a few words about the components of these other tribes, both the African and the non-African, and also about the different elements of the non-African components.

II.—It is at present generally admitted that, broadly speaking, there are two chief elements in the Malagasy people: one African, and the other Malayo-Polynesian. Much uncertainty and obscurity, however, prevails as regards details. With respect to the Vazimba as compared with the other tribes, many particulars besides the names point very distinctly to a difference of origin. We know from the traditions of the Hova that the Vazimba were conquered by them and were then driven out of the interior of the country. The Hova regard them as a different people from themselves, and acknowledge that the part of the country which they at present inhabit, i.e. Imérina, formerly belonged to the Vazimba. There is no such distinction between the inhabitants of the interior and the other tribes as apparently existed between them all and the Vazimba.

The Vazimba seem to have been owners of all the country now inhabited by the Hova and Betsileo; at least I have been told by the natives that their tombs are to be found throughout the interior of the island. This shows that the tribe must have been one of considerable size, although the country at the time of their living here may have been very thinly populated. The Vazimba were probably a tribe or people of one origin; their name does not appear to be a combination of different Malagasy words or derived from local circumstances, habits, etc., but one most probably carried with them from the country from whence they came, and which they retained; all which seems to indicate that there must at one time have been a large immigration to this island. Probably war with other tribes, or some other calamity, was the cause of their first leaving their native land; and somehow or other they arrived in this country. The number of individuals belonging to the tribe would probably be small on their first arrival here, compared with their numbers later on, but probably an entire tribe, or at least a large part of such tribe, set out for a new country at the same time.

It is generally thought that the African inhabitants of Madagascar at first occupied only the coast, and that they were driven thence to the interior by the Malayo-Polynesian tribes, who came afterwards. Many circumstances appear to me to make it more probable that the Vazimba, who most likely were the first inhabitants of this country, at once, or very soon after their arrival, and not after having been driven away from the coast, came up to the interior. The African tribes generally are not much averse to living near the sea, but still they prefer being inland; and as the shores of Madagascar are known to be very unhealthy to new comers, these tribes very likely went inland. There they grew to be a large people, inhabiting, though sparsely, the whole of the central provinces of the island.

One of the greatest difficulties with regard to the Vazimba is their fate later on. There is at the present day a tribe of that name in the western part of Madagascar, but it is only a small one. Their language is the same as that of the Sakalava, and they themselves are incorporated into the Sakalava tribes.\* How is this to be accounted for? It seems indeed, for

\* ANNUAL, 1883, p. 23.

several reasons, to be much easier to explain all the facts if we could regard the Vazimba as a 'Malagasy' tribe originally,—that is, as having the same origin as the other peoples—than if we regard them as an African race. Some suggestions on this point may be offered.

We may certainly presume that the Vazimba did not leave a country inhabited by them, probably for a long time, without a struggle; and they may, in the wars which ensued, and which ended in their expulsion, have been very much reduced in numbers. Indeed the great reverence and fear of the Vazimba on the part of the Hova seem to indicate that much atrocity was committed; and we know also from wars of a later date that the Hova could commit very cruel deeds. All the Vazimba could not have escaped; some of them most certainly were made slaves.

Reduced then in number, the Vazimba went westwards. They did not come to an unoccupied country, but to an inhabited region. Somehow or other they seem to have got on tolerably well with the tribes in the west, and even came to be regarded as one of those tribes. This was no doubt owing especially to the common hatred of the Hova entertained by themselves and the tribes to whose country they came. The strength of the Vazimba as a separate tribe having been broken, they gradually learned the language, and adopted the manners, of the people around them.

If this be the true story of the Vazimba (about which, however, one cannot speak positively), the African element in the Malagasy people as a whole must be accounted for in another way.

III.—The Vazimba we regard then as the first inhabitants of Madagascar and occupying only the interior; the other tribes of the island originated by immigration to the coast later on. From whence these tribes came is well known, as the language, among other things, clearly shows that they consist of Malayo-Polynesian elements and an African one; but several questions yet require to be answered.

The first question is: Which of these two elements of the Malagasy people may be supposed to have come first? I do not think this can be decided; but the result which we see in the intermixture of the Malayo-Polynesians and the Africans may be explained, whichever of the two were the first immigrants. When we see how decidedly the Malayo-Polynesian element prevails in the language, especially in the structure of it, one would be inclined to say that the Malayo-Polynesians were the first; as indeed I think they were. But we know well from the history of other countries that a result equal to what we see in Madagascar may have been arrived at in other ways; as an example of which may be instanced the Anglo-Saxon invasion of Britain.

With regard to other questions, we have, I think, more to guide us. It is not likely that very large parties of either of the two peoples came at one time; nor is it likely that either element was for a long time left alone. The most probable supposition is that an immigration in small parties, with no long interval between their successive arrivals, went on for a long time, and that an influx both of Malayo-Polynesians and of Africans went on side by side.

What especially makes me think of an immigration in small parties is the character of the tribal names. In accordance with what has been said before, we have no names (except that of the Vazimba, of which we do not speak here) which shew from whence the immigrants came. If any single large tribe had arrived on the island and had time to settle down, and for a long period to grow strong and cover a large territory, we should certainly have had such names preserved; and their non-existence seems to indicate that a mixture of peoples from different parts occurred soon after the settlement took place, and that the different names of the tribes gradually came into

existence together with the tribes themselves. This seems to be the most likely explanation of the names of the smaller tribes. As to the large tribes, one would be inclined to think that they, from the time of the arrival of their ancestors, had each been one single tribe. Apart from what has been advanced from the character of the names, the traditions of these large tribes, and their condition up to the present time, tend to show that they are a combination of various smaller tribes, whose bond of union is, however, not very close. That such names as Sakalava, Betsileo, and Betsimisaraka, being names of great divisions of the people, have been formed may of course point to the fact that from the time of their settlement there has been something which has united the different tribes, but the ties have certainly been very loose;\* this is evident from two facts especially: (a) petty wars have continually been going on between different divisions of tribes (as, for instance, those of the Sakalava), as if between different tribes; (b) the boundary lines between the tribes in many places are not very distinct, but people belonging to different tribes live together in friendly relations, and many small towns belong half to one tribe and half to the another.

The prominent element in the population has been the Malayo-Polynesian. With regard to this, it seems to me that there is a great incongruity between, on the one hand, the *language*, and, on the other, the *physiognomy*, etc., of most of the tribes in Madagascar. As has been pointed out by various writers, the Malagasy language is very nearly akin to the Malayo-Polynesian group of languages; and especially has much stress been laid upon the similarity of structure. That an African element exists is generally admitted, but undoubtedly the Malagasy language is mainly a Malayo-Polynesian one. But the African admixture seems to be much more preponderant in regard to the complexion, etc., of the majority of the Malagasy. How is this to be explained? It seems to me to be quite in accordance with what we should expect when two races, like the two of which the Malagasy are supposed to consist, meet and intermingle with each other. Although the Africans have been strong in number and have formed a large proportion of the people, the other tribal element *has subdued them*; and the language, manners, etc., of the latter have been impressed upon the African element of the population.

If the tribes from the Eastern Archipelago, as well as those from Africa, arrived here in small parties, the Africans, as a rule, were probably not subdued in war, as was the case with the Vazimba, but they became by degrees accustomed to yield to the will and superior intelligence of the others. This certainly is in accord with tradition, or rather the absence of tradition, as there is nowhere in the country, so far as I know, any account of such warfare as that which must have been waged between the Hova and the Vazimba; and in no part of the country are there any traditions of a people which was regarded as quite a different nation, as we find to be the case in the inland provinces with regard to the Vazimba. There are certainly stories enough about petty wars, but only skirmishes, such as are yet fought occasionally, especially in the Sakalava country, and which generally end when some nine or ten men are killed. The wars of the Hova of later date, in which they subdued the different inland tribes, are also in many respects very different from the war which resulted in the expulsion of the Vazimba.

I readily acknowledge that objections may be made to the view here advanced about the immigration being in small parties. But the supposition

\* Any who will look carefully into the facts given by M. Guillaïn in his book on the Sakalava, entitled *Documents sur l'histoire... de la partie occidentale de Madagascar*, or will read my paper in *ANNUAL*, 1878, pp. 53-65, condensed from M. Guillaïn, "The Sakalava: their Origin, Conquests and Subjection," will see that the Sakalava consist of a large number of distinct tribes only loosely connected together by having formerly been subdued by one of their number.—ED. (J.S.)

that the coast was inhabited by a large African population, and this having been conquered by a large party of Malayo-Polynesian invaders arriving at one time, has its great difficulties also. It is very improbable that sufficiently large parties of these arrived as to be able to conquer the people already settled in the country. The whole population being substantially one, and the combination of the African and the other element being, to a great extent, the same all over the island, seems to make such a theory improbable also. The island is very large and, except in a very few places, very thinly populated; and if a numerous African people had settled here, and large portions of other tribes had arrived who really could risk a war and conquer them, we should have expected to see *the two elements more distinctly separated*; for instance, an African element in the interior, and a much more purely Malayo-Polynesian one in other parts of the island, just as is the case in several of the islands of the Malay Archipelago.

But an objection might be urged against the view here advanced, derived from the common name, Malagasy, by which we call these people, viz. that the Malagasy had known themselves as one nation, and that this nation really sprang from one Malayo-Polynesian tribe which found its way to this country, only intermixed with some African elements. As to any argument derived from the name Malagasy, I do not consider this of much weight, as I think Mr. Ellis is right in his opinion of the name when he says that it was given by strangers.\*

IV.—The difference between the various tribes of the island in physiognomy, colour, etc., is of great interest, and some remarks must be offered upon this point.

The difference between the various tribes of Madagascar has, as far as I am aware, been mainly derived from the strength of the one or the other of the two elements, the African and the Malayo-Polynesian. This has been argued from various circumstances, such as the hair, the language, etc. The climate of the different parts of the island has also been taken into consideration.

It would be worthy of study, and no doubt an interesting task, to investigate the different dialects with a view of ascertaining whether the two main elements of the Malagasy language are distributed in accordance with the prevailing type of the different tribes; that is to say, whether the dialects of the Hova and the lighter tribes have more of the Malayan element in them, and whether the dialects of the darker peoples contain more derived from African sources. Although no such investigation has yet been made, I believe that in most instances, no special or marked correspondence between the two could be proved to exist. The Hova and the Betsileo are not a little different in appearance, yet their dialects are very much the same. The Sakalava are dark in complexion, while the Mahafaly are tolerably light; yet certainly the dialect of the Mahafaly does not approach the Malayan nearer than does the dialect of the Sakalava, as the difference in complexion of the two peoples would lead one to think might be the case.

It is a well known fact that climate affects the complexion to a great degree. Dr. Livingstone says that the tribes of the interior of Africa are lighter than the population on the coast; and we find the same thing in other parts of the world. But this is not sufficient to explain the difference found here in Madagascar. The Hova and the Betsileo have both for a long time lived in the central parts of the country, while the Mahafaly and neighbouring tribes live on the coast; yet we find a pretty strongly marked difference between these tribes inhabiting the same districts.

\* Ellis's *History of Madagascar*; vol. I., p. 3. [Strictly speaking, Mr. Ellis here only refers to the word 'Madagascar,' as having been given by foreigners; but 'Malagasy' (or 'Madegasse') is probably derived from 'Madagascar.'—EDS.]

I do not think this difference can be satisfactorily explained as long as we only bear in mind the two main elements of the Malagasy nation; we must also take into consideration the differences there may be in the constituents of each of these two main elements. The differences that may possibly be pointed out within the African tribe or tribes which have settled in Madagascar, is a question into which I have not entered; I shall only say a few words about the other component of the Malagasy people, the Malayo-Polynesian one.

I have called this component the Malayo-Polynesian one, in accordance with what has generally been done by writers on the ethnology of Madagascar. This name indicates, of course, that this component consists of different elements; but, as far as I have seen, this distinction has been brought to bear very little on the explanation of the differences between the tribes in Madagascar. It may nevertheless have a great deal to do with them.

As has been said above, the immigration was probably not effected all at one time. As the different tribes of the great Malayan and Polynesian races are very daring and skilful sailors, we may easily suppose also that several of these tribes have come to Madagascar. Now there is a considerable difference between the different tribes of each of these great stocks; and as for the complexion of the Polynesians, for instance, it "varies between light and dark-brown."\* We have in this difference very much to aid us towards an explanation of the differences in the tribes of Madagascar.

It is well known to every one who is at all acquainted with Madagascar that a great difference exists between the Hova and the other tribes, varying of course with these non-Hova tribes. If I were to say anything about the different origin of the Hova, on the one hand, and the majority of the other tribes, on the other, I should say that the Hova are most likely Malaysans, and the other tribes mainly Polynesians. Physiognomy, type of the tribes, and their history in Madagascar, etc., all seem to agree with such a hypothesis. As to the type of the Hova, much at least which I have seen about the Malays is in great accordance with the whole character of the Hova. The probability of the Hova being the first of the invaders from the east who migrated to the interior of the country, is not opposed to this view either. A Malayan tribe would be more likely to think of starting for the interior than the Polynesians, who are more accustomed than the Malaysans to the coast, since most of the islands inhabited by them are so small that the great majority of them are coast tribes and fond of the sea. If the majority of the eastern immigrants were Polynesians, and the Hova were Malaysans, the reason why the Hova were the first of the eastern tribes who started for the interior would also, in so far, be clear to us, as they were looked upon as strangers. They may, of course, have dwelt some time on the coast, even a long time, for all we know, and perhaps the growth of the different tribes and the jealousy caused by the increase of the population caused them to migrate.

Speaking of the different complexion, etc., of the tribes of Madagascar, I must add a few words respecting the difference between the elements of the different tribes. I shall, however, confine myself to the Hova. When we say that the Hova are of lighter complexion than the other tribes, we must not forget that, even if this holds good in regard to the tribe as such, there are a great many individuals among them who are darker than many members of the other tribes. I do not refer to the Mozambique slaves imported in recent years, of whom a great many may be seen here, but only of those who really belong to the Hova tribe. Many reasons may be given for this difference of complexion, for instance, intermarriage in former times,

\* Grundemann: *Missions-Bibliothek*; iv, 24.

different social position, etc., all of which are matters treated of in any ethnological work. A very noticeable fact is the dislike of the people to intermarriage between different classes, and the consequent preservation of the peculiarities of these different classes. Some hours' journey to the north of the Capital are certain small towns, which from old times have had the right of preventing any one from living there except the native inhabitants of the place and their children; and the inhabitants of these towns are remarkably light in complexion. Many of the Hova, and especially many the leading people, are very dark indeed; and in Antananarivo people may be seen of all shades of colour, from those who are as black as African negroes, to nobles and others so light that the reddish colour of the cheeks is clearly visible, thus very much approximating to the Aryan races of India.

It will be seen that in these notes I have not taken into consideration all the elements of the Malagasy people, but only their main components; hence I have made no reference to the Arabs, or to the Hindu settlers, who are also found in Madagascar, chiefly in the north-western portions of the island.

S. E. JORGENSEN.



## NOTES ON THE <sup>X</sup>GEOLOGY OF THE INTERIOR OF MADAGASCAR.

MUCH has been written, especially during the last few years, on almost every conceivable topic connected with Madagascar. We have had disquisitions on the ethnology, language, customs, proverbs, folk-lore, and superstitions of the people; articles devoted to the fauna and flora; reports of mission work and the spread of education, etc.; but as yet little has appeared on the geology of this great island. Here and there may be found references of a fragmentary character, and on some of the maps, notably the large one by Dr. Mullens, may be seen notes, often incorrect, on the geological structure of the country; but as yet, no definite or satisfactory description has ever been given of the geology of any part of the island, nor indeed may we expect such a description until the country is properly explored and surveyed by competent geologists.

The aim of the following paper is merely to give a brief and general account of the geological features of the interior of the island, and to embody the observations and notes which I have been making on the subject during the last year or two. I should like to be able to give more particulars than are here given upon many points, such, for instance, as the dip and strike of the rocks; their composition and accessory minerals; their weathering; the locality, succession, and extent, of the

different strata; the volcanic phenomena; thermal springs, etc. I indulge the hope, however, that at some future time I may be able to enlarge on these and similar topics.

The central portion of Madagascar is generally regarded as consisting chiefly of granite. Mr. Wallace, for instance, in his *Island Life*, says of it: "A lofty granitic plateau, from 80 to 160 miles wide, and from 3000 to 5000 feet high, occupies its central portion, on which rise peaks and domes of basalt and granite to a height of nearly 9000 feet;" and in the same book there is a physical sketch-map in which the whole of the interior of the island from about  $14^{\circ}$  to  $23^{\circ}$  S. lat. is represented as an "Elevated granitic region." Now if we use the terms 'granite' and 'granitic' in a very wide and popular sense, and include in them the various members of the crystalline series of rocks, these descriptions may be regarded as correct; the truth is, however, that by far the greater part of the interior of Madagascar consists of gneiss and other crystalline schists, though gneiss very largely predominates. Granite no doubt does occur here and there in the form of bosses and, in some places perhaps, intercalated with the crystalline schists, but gneiss is certainly the prevailing rock. The exact boundaries of this metamorphic area are as yet unknown, but it may be said, I think, that, at least from Môramanga on the east to beyond Lake Itasy on the west, and from Antôgodrahôja on the north to the extreme south of Bêtsiléo, that is, through at least five degrees of latitude and about two of longitude,—and probably a very much larger area than this—the country consists of great and monotonous stretches of gneiss, interspersed here and there with other metamorphic rocks, and occasionally granitic bosses, basaltic masses, and volcanic cones. In many places the gneiss is of so highly metamorphosed a character that, at first sight, one would conclude it to be granite, but an examination of other portions of the mass soon reveals its real nature. In and about Antanânarivo, for instance, the gneiss is generally so highly metamorphosed that, without due care, its real character may be overlooked, as indeed is shown by the fact that it is almost always spoken of as granite. Still the rock in certain localities, even where comparatively large sections are exposed to view, presents such an amorphous character, not having even the slightest trace of foliation, that, could one feel sure that its texture were the same throughout the mass, one would unhesitatingly speak of it as granite. Frequently the rock appears as though it were streaked or grained, when it may be called granitic gneiss.

The whole of the interior of Madagascar then is one of those

extensive tracts in which, according to the almost universal opinion of geologists, ordinary sedimentary strata have been converted by heat into gneiss, quartzite, clay-slate, hornblende rock, mica-schist, and other members of the crystalline schist series, among which occasionally occur eruptive granitic bosses and basaltic masses, and, in one or two districts, extinct volcanic cones.

Gneiss, as already stated, is by far the most abundant of these crystalline rocks. Almost all the mountains (Ankàratra and Angàvokély excepted) and hill-ranges consist of it, the direction of the latter being governed by its strike. From what I have observed,—though further observations are needed to confirm the statement—the general strike of the strata is in a northerly and southerly direction, more or less corresponding with the longitudinal axis of the island; hence the road from Central Madagascar to the east coast passes over an endless series of more or less parallel hill-ranges, on one of which Antananarivo, the Capital, is built. For the same reason the road to Mojangà, *via* Kinàjy and Andriba, passes, for a good part of the way, chiefly along a series of valleys. A few miles north of the Capital, however, the direction of the hills is mainly east and west, and, as the dip is towards the north (about N.N.W.), at an angle of about  $40^{\circ}$ , most of the mountains have the steeper and more rugged sides facing the south. Such, for instance, are Andringitra, Ampanànina, etc. These hills, with the strike east and west, apparently commence somewhere in the neighbourhood of Ambòhimànga and reach at least as far as Ifànja marsh, north of Lake Itasy, a distance of about 50 miles. In one part of their course the strata become vertical or nearly so; this occurs a little to the north-west of Ambòhibelóma. Here there is a ridge or series of ridges, the highest of which forms the mountain of Ambòhitrondrana, 30 or 40 miles W.N.W. of Antananarivo. Immediately north of the Capital, beyond the mountain of Andringitra, the rocks are much crumpled and contorted and, so far as I can make out from my scanty observations, have no persistent strike in their foliation.

The gneiss, being so abundant and covering such a wide area, is, as might be expected, various in texture and mineral composition. For many miles round the Capital it is chiefly of a greyish colour, while in the mountains of Antàramànana and Vàvavàto and other places it is reddish or pinkish, owing to the flesh-coloured orthoclase contained in it. A great deal of it, moreover, is hornblendic, while in some districts, notably about Lake Itasy, it is garnetiferous. The garnets that I have



seen are chiefly of a ruby-red colour. They are frequently offered for sale in large quantities, but are of no commercial value. As for the mica contained in the gneiss, it is chiefly biotite, which occurs abundantly in disseminated and aggregated scales. Muscovite or common mica also exists, and may be sometimes found in plates several inches in length.

The most abundant of the accessory minerals existing in the gneiss is undoubtedly magnetite. This is found in such quantities in certain localities as to render observations taken with the prismatic compass unreliable. In the part of the country east of Imèrina known as Amòronkay, this magnetic iron is specially abundant. It is here that the natives, after separating it from the gangue by washing, work it in their rude way, converting it chiefly into spades, which are taken for sale to various parts of the island. It is also worked in the same way in Eastern Betsileo, and doubtless also in other places. Abundance of magnetite is also found a little to the west of Ambohibeloma, near the village of Anjamànga, and also at Ambòhitrandraina hill and Ambòhimanóa mountain. Indeed there are many localities where it is so plentiful that, were there coal to be found anywhere in its neighbourhood,\* it might be expected to form at some future day a great source of wealth. It exists in fact, in greater or less proportion, throughout the whole of the interior of the island, and by its oxidation imparts the red colour to the soil. In some places nodules of this magnetite are found almost as large as one's fist. Frequently one may meet with a kind of ferruginous conglomerate, formed by the percolation of water charged with iron through sand and pebbles. This conglomerate may often be seen by stream sides; but in some places away from streams it is found in considerable quantity. In the valley between the villages of Isoàvinimérina and Ambòhimandray there is a large bed of it, which the natives know as *tai-màmba*, or *taolan-tàny* ('crocodile dung,' or 'bones of the earth').

Iron pyrites also exists as an accessory mineral in the gneiss. This may frequently be seen in small glittering specks, if a magnifying lens is moved slowly over a freshly fractured surface of the rock. It exists, as a rule, in too minute quantities to cause disintegration of the rock containing it, or to prevent its being used as a building material. Large crystals, however, usually in cubes, are found in some districts,—probably in Vàkin' Ankàtratra—which perhaps some day may be employed in the manufacture of copperas and sulphuric acid. Black

\* It is needless to say that coal is never found in metamorphic strata, and that therefore it is in vain to hope that it may some day be discovered in the interior of the island.

tourmaline is found abundantly in some places, especially on the eastern flank of Famolzankòva, to the west of Valàlafòtsy, and in Vakin' Ankaratra; but whether it is found as an accessory mineral in the gneiss, I cannot say. The variety rubellite is also not uncommon.

In descriptions of the central provinces of Madagascar we not unfrequently see statements to the effect that there exist extensive deposits of clay. Dr. Mullens, for instance, says: "From these valleys [of Vavavato] we came again on to the red clay." Again: "I will not dilate here upon the beauties of this noble basin cut out of the clay deposits," etc. In *The Great African Island* too it is said: "A very large extent of this portion of Madagascar is covered with bright red clay, through which the granite and basaltic rocks protrude." The same statement is repeated in Mr. Shaw's recent book, *Madagascar and France*. What then is this clay, so-called? It is merely the decayed or weathered rock, chiefly gneiss, reddened with the magnetite above alluded to. This decay or weathering of the rock has, in some places, reached an enormous depth. In one place north of the mountain of Andringitra I found that the gneiss had decomposed into clay to the depth of 180 feet. It is owing to this decomposed condition of the rock that the heavy rains in the wet season scoop out those deep and unsightly ravines in the hill-sides which are so common in the interior of the island, and which are occasionally used as cattle-pens by fencing in the lower end. This weathering, moreover, explains the phenomenon of those large 'boulders' which may frequently be seen even on hill tops, and which have been more than once considered as erratic blocks due to glacial action, but which are merely masses of hard rock, rounded by further weathering, that have hitherto resisted decomposition.

The other members of the crystalline schists are of much less frequent occurrence than the gneiss, and as yet comparatively little is known either as to their locality or their exact mineral character. Such data, however, as I have been able to gather, imperfect though they be, are here given. Clay-slate is found in one locality at least in the region of which we are speaking, that locality being somewhere to the west of Ambositra in Betsileo (at Ambòhimahazo in Mānandriana?), about 90 to 100 miles S.S.W. of Antananarivo. The slate has been employed in the roofing of the Palace Church in the Capital. A rock found in some places,—on the mountains of Ambòhimandà, Ambòhimiangàra, and Karaoka (north of Ifanja marsh), for instance—is a kind of argillaceous schist. It is known as

*vatodidy* and is used occasionally for ornamental purposes in building\* and also for native lamp-stands. Hornblende-rock (amphibolite) seems to be by no means common; it exists, however, close to Ankàzobé in Vònizóngo, on the east (i) side of the village. Actinolite rock and asbestos seem to be pretty abundant in some parts of Vakin' Ankaratra. Mica-schist is found in various districts, especially perhaps in Western Imerina and Vakin' Ankaratra. Chlorite-schist may also occasionally be met with. Besides these there are found granular or crystalline limestone, quartzite, and graphite. One locality where crystalline limestone may be seen is about a mile to the south of Ambòhimiràkitra, seven or eight miles south of the Capital. While some of this limestone is in amorphous masses, other portions of it are coarsely crystalline and would doubtless form, if sufficiently large blocks could be quarried, beautiful white architectural marble. Mr. Wills last year brought from the district of Antsihànaka a specimen of coarsely crystalline limestone of a reddish tint, with disseminated scales of what is probably chlorite; and Mr. Coombes made me a present of a similar specimen, which he said was obtained not very far from the Capital.

Among the localities where quartzite is found may be mentioned Ambòhimànga, to the north of Antananarivo (the quartzite here contains scattered scales of green mica); the hill of Ambòhitraindraina; the south-west foot of Ambohimanoa (west side of the river Ikòpa); Anjamanga, to the west of Ambohibeloma; the north-east end of Ifanja marsh; Anjànahàry (in the north-eastern suburbs of the Capital); Ambohimirakitra, where the white crystalline limestone occurs; and in many other places. Some varieties of the quartzite are known by the natives as *vatovàry*, and are used by them as whetstones.

As for the graphite, which the natives know as *mànjaràno*, it may be met with in small quantities in all the places mentioned above where quartzite occurs. Quartzite and graphite indeed so often occur in association that one comes to expect that wherever one of them is seen the other is pretty certain to be not far off; and one is somewhat tempted to venture the supposition that the quartzite represents the sand of an ancient sea shore (for quartzite is merely hardened sandstone), near to which grew those primitive forms of vegetation which, through a long process of transformation, now exist in the form of graphite. Whether graphite and quartzite occur so often together in

\* Considerable use has been made of this *vatodidy*, which is easily worked and carved, in the building of the Chapel Royal at Antananarivo; all the interior shafts, as well as cornices, bands, and panels, are of this stone, which, being of a dark red colour, makes a good contrast to the ordinary stone of the walling.—ED. (J. S.)

metamorphic regions in other parts of the world I cannot say. The thickest bed of graphite that I have seen is near Ambohimirakitra, where the white crystalline limestone appears. In various localities in Betsileo this mineral also occurs in considerable quantity. The natives are not aware of the uses to which graphite in some countries is put; they know not that this is the substance used in the manufacture of lead pencils and crucibles and for diminishing the friction of machinery; and they have not the slightest inkling of its probable origin, and of the untold ages that have passed, and the fiery forces to which it has been subjected, since the time that it probably existed in the form of living plants. The only use to which the natives put it is that of polishing certain of their rice-pans and dishes.

It is scarcely necessary to say that quartz veins, sometimes of great thickness, are frequently found intercalated among the other strata. Of quartz itself many varieties are found, as (*a*) rock-crystal, which occurs in many places and frequently in large crystals; (*b*) rose quartz, found on the eastern flank of the hill-range of Famoizankova, to the west of Valalafotsy, and in Antsihanaka; (*c*) smoky quartz, which occurs in Antsihanaka; (*d*) milky quartz, a beautiful snow-white variety of which exists at a spot between Ankazobe and Manèva in Vonizongo; (*e*) jasper (?), found on Vavavato mountain; (*f*) agate (fortification agate), found in Antsihanaka, etc. Besides these, amazon-stone, a kind of felspar of a beautiful green colour, is found in Imàmo, not far from Ambohibeloma.

Here and there the vast stretches of gneiss and its allied rocks, of which we have been speaking, are invaded by masses and bosses of granite. The mountain of Vombôhitra, situated about 70 to 80 miles north of the Capital, is perhaps the most remarkable of these eruptive bosses. The mountain is of a circular shape, is perhaps eighteen miles in circumference, and rises boldly, with inaccessible sides in many parts of it, to a height of about 1000 feet above the surrounding country. The granite is of a reddish or pinkish colour, having flesh-coloured orthoclase and black mica. Within a short distance of this immense granitic boss there is found a coarsely crystalline variety of graphic granite, probably existing in veins, running out from the mountain. Here and Vakin' Ankaratra (near Vavavato) are the only places where I have found this form of granite. Another boss of what is probably granite is the hill of Andriba on the western road to Mojanga. These two hills, by the bye,—Vombôhitra and Andriba—were they properly fortified, would form veritable Gibaltars, and, with a few defenders, would be able to withstand the most formidable attack from an invading force.

Granite is also found rising in the hill-range known as Fa-moizankova, on the western confines of Imerina, to the west of Valalafotsy; it exists also from about ten miles east of the Capital to within three or four miles of the forest—from about Isoàvina to near Mântasòa—where it rises in numerous rounded or cupola-like masses, of which Ambâtovòry, Ambâtomànga, etc., are examples. In this region it is chiefly porphyritic, and probably metamorphic, the numerous orthoclase crystals running more or less in a linear direction, east and west, and parallel with the strike of the few bands of gneiss here and there visible. But besides the masses of granite here mentioned, there are areas of what is almost certainly metamorphic granite, confusedly intermingled with the gneiss, and shading off the one into the other so imperceptibly that it is often quite impossible to say where the granite begins and the gneiss ends.

Let us now proceed to notice some of the volcanic phenomena of the region. Basaltic rocks appear in many districts in the form of veins, dykes, plateaus, lava streams, and cones. One of these basaltic cones, of small dimensions, occurs about ten or twelve miles to the west of the Capital. A number of others may be seen between Antananarivo and Fianàrantsoà (the chief town of Betsileo). One of these is known as Vòtovórona.\*

Two basaltic dykes may be seen in the Capital: one immediately to the north of the Printing Office at Imarivolanitra, the other crossing the road just beyond the church at Isótry. Basalt may be seen sometimes in the streams in the forest of Eastern Imerina; it is found also abundantly in Antsihanaka. In Valalafotsy there is a basaltic hill, on the summit of which are two or three miniature shallow craters, only a few yards in diameter, and having cellular lava around their edges. Ankaratra mountain mass, the highest in the island, reaching, in its highest peak (Tsiáfajàvona), to a height of 8950 feet, consists chiefly of basalt, and may perhaps be described as a basaltic plateau, extending, roughly speaking, over an area of perhaps 25 square miles. Occasionally basaltic columns may be here seen rising perpendicularly and decomposing into wacke. Some portions of the basalt are amygdaloidal; and in one specimen, which I believe is from Ankaratra, the cavities are lined with radiating bundles of what is probably natrolite; the same basalt is also porphyritic with small crystals of an amber-coloured mineral which is infusible before the blowpipe. But besides basalt there may be found, lying in the bed of some of the streams running down the sides of the mountain, pieces

\* I am not absolutely certain that these cones are basaltic, though they are, if my memory serves me correctly.

of vesicular trachytic lava, although apparently there are no remnants of volcanic cones to be seen at the present time.

Between the mountains of Ankaratra and Vavavato there exists a remarkable sub-conical hill of columnar trachyte; this is doubtless the plug or filled-up pipe of an ancient volcano, exposed by denudation of its former covering. It is in fact a volcanic neck. It descends into the earth perpendicularly, showing that there has been no tilting of the rocks through which it passes since the volcano was in a state of eruption.

But in addition to the above evidences of former volcanic activity in Central Madagascar, there are many scores, probably hundreds, of volcanic cones. These are situated in two localities especially: in Mandrairano on the western side of Lake Itasy, and in the neighbourhood of Betàfo in Vakin' Ankaratra; the former being from 50 to 60 miles west, and the latter from 70 to 80 miles south-west, of the Capital. Both localities are about 130 miles from the sea on the eastern side of the island, and 150 on the western side. It is hardly necessary to say that all these volcanoes are extinct, and that there are none in activity at the present time in any part of Madagascar.\* On the west side of Itasy the volcanic cones exist in great numbers, and these therefore shall be first described.

The extinct volcanoes of this district of Mandridrano extend for a distance of about twenty miles north and south and perhaps three or four east and west. They are for the most part what are known as scoria cones, that is, huge piles of volcanic ejecta, varying in size from grains of sand to masses as large as a football. The cones are thickly studded over the district, in some parts clustering together more thickly than in others. There is no single large volcano to which the others are subsidiary, or upon which they are parasitic. Occasionally there is a series of cones which have evidently been heaped up by the simultaneous ejection of scorix from different vents situated on the same line of fissure, but so that the cones have run one into the other, leaving a ridge, generally curvilinear, at the

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\* Scrope, in his *Volcanoes*, 2nd edition, p. 428, says of Madagascar: "There is some reason to believe in the existence of active volcanic vents in this great island;" and Dr. Daubeny, in the 2nd edition of his *Volcanoes*, p. 433, in referring to the islands on the eastern coast of Africa, says: "The principal of these are the great island of Madagascar, the isle of Bourbon, and the Mauritius, the first of which has been too little explored to allow of my announcing with certainty anything respecting its physical structure;" and in a note he adds: "Madagascar is stated by Daubuisson to contain volcanoes, on the authority of Ebel (*Bau der Erde*, tom. ii. p. 289), who reports that in this island there is a volcano ejecting a stream of water to a sufficient height to be visible twenty leagues out at sea." What remarkable eyesight those from whom Daubuisson heard the story must have had to see an invisible phenomenon so far away! Dr. Daubeny continues: "Sir Roderick Murchison, Dec. 1827, exhibited at the Geological Society some specimens of a volcanic nature said to have come from this island, but the locality was not mentioned."

summit. None of these extinct volcanoes reach the height of 1000 feet. Kàsige, which is probably the highest, I found by aneroid to be 863 feet above the plain (5893 feet above the sea). Andrànonatòà is perhaps next in height to Kasige. Kasige is a remarkably perfect and fresh-looking volcano, whose sides slope at an angle of about  $40^{\circ}$ , and is somewhat difficult to climb. The scorix on the sides have become sufficiently disintegrated to form a soil on which are found a by no means scanty flora; for among other plants growing here may be mentioned an *Aloe* (*A. macroclada*), a *Clematis* (*C. trifida*), two or three composite herbs (*Senecio cochlearifolius*, *Helichrysum lycopodioides*, *Laggera alata*, etc.), some grasses (*Imperata arundinacea*, etc.), a species of *Indigofera*, and an orchid. On its top is an unbreached crater, which measures, from the highest point of its rim, 243 feet in depth. It may be mentioned in passing that on the very summit, in a hollow 'cinder,' there was a small piece of money, perhaps of the value of a half-penny, and a small bead, as also a portion of a banana leaf, with a few pieces of manioc and two or three earth-nuts placed upon it; these had been deposited there by some or other of the heathenish inhabitants of the place as a votive offering either to their ancestors or to the Vazimba (the aborigines of Central Madagascar). Contiguous with Kasige, and adjoining its south side, though not so high, there is another volcano, Ambòhimalàla, and dozens of others are to be seen near by.

One thing with regard to these volcanic piles soon strikes the observer, which is, that they are frequently lop-sided, that is, higher on one side of the crater than on the other. The higher side varies from north to north-west and west. This is accounted for by the direction of the wind during the eruption, causing the ejected fragments to accumulate on the leeward side of the vent. Now we know that the south-east trades blow during the greater part of the year in Madagascar, hence the unequal development of the sides of the cones. The same thing may be also observed in the volcanic piles in the neighbourhood of Betafo.

A very large number of the cones have breached craters, whence lava has flowed in numerous streams and floods, covering the plains around. These streams and floods consist, in every instance, I believe, of black basaltic lava; a sheet of this lava, the mingled streams of which have flowed from Ambohimalala and some other vents, has covered the plain at the foot of Kasige to such an extent as almost to surround the mountain. Similar sheets are to be seen in other parts of the district, but they are so much alike that a description of one will suffice for all.

Ambòditaimàmo (or Ambòhitritaimàmo?) is a small volcano to the north of Lake Itasy, and at the northern confines of the volcanic district. It possesses a breached crater turned towards the east; from this has issued a stream of lava which, following the direction of the lowest level of the ground, has swept through a small valley, round the northern end of the mountain, and spread out at its west foot. This sheet of lava, which is horribly rough on the surface, occupies but a small area of some two or three square miles. It has been arrested in its flow in front by the side of a low hill (*tanéty*). It is cut through in one part by a stream which, in some places, has worn a channel to the great depth of 80 or 90 feet. Its surface, which is slightly cellular, is covered by some hundreds of mammiform hillocks, which must have been formed during the cooling of the liquid mass. The hillocks are mostly from twenty to thirty feet high, and apparently are heaped-up masses of lava, and not hollow blisters. The lava itself is black, heavy, and compact, being porphyritic with somewhat large crystals of augite. As yet it is scarcely decomposed sufficiently to form much of a soil, though grass grows on it abundantly, and a few other plants are to be seen.

A little to the south of Amboditaimamo there is another volcano, known by the name of Andràrivàhy. It is situated on the summit of a ridge of hills,—astride of it, so to speak—and from its crater there has been an outflow of what must have been very viscid lava, for though the sides of the volcano and the ridge of hills form an angle of from 30 to 40 degrees, the ejected matter has set or 'guttered' on the slope, only a small portion of it having reached the valley below. This ridge of hills, through which the volcanic orifice has been drilled, is composed entirely of gneiss; and indeed it may be here stated that the whole of these volcanoes, as is the case also with those about Betafo, rest upon a platform of gneiss.

Throughout the district numerous fragments of augitic or basic lava, trachyte, trachytic tuff, and basaltic conglomerate lie scattered about in abundance. The trachyte is of various shades of yellow and grey, and frequently porphyritic with large crystals of sanidine. Pumice, obsidian, and pitchstone do not seem anywhere to be found.

In addition to the numerous scoria cones there may be seen here and there in the district some half-dozen or more other volcanoes, but differing entirely in character from those which have been spoken of above. These are large bell-shaped hummocks of trachyte. They are without craters and are, for the most part, composed of a light-coloured compact rock.



This rock, having originally had a highly viscid or pasty consistency, has accumulated and set immediately over the orifice through which it was extruded; such hummocks are Ingolofotsy, Bètehèza, Angàvo, Ambàsy, Isàhadímy, Ambóhibè, Antsahòndra, etc. Ingolofotsy, situated to the north-west of Itasy, is perhaps the most striking in appearance of these trachytic hummocks. It bears some resemblance to a bell or a Turkish fez, except that its sides are furrowed with water channels, and its truncated summit is notched in a remarkable manner. Its height above the plain is 665 feet (5258 feet above the sea); the inclination of its sides averages probably  $50^{\circ}$ . Adjoining Ingolofotsy on the south-west is Beteheza, a large mass of trachyte which has probably welled out from an orifice on the same line of fissure from which Ingolofotsy was extruded. Angavo is another of these trachytic domes. One singular feature in this mountain is its numerous shallow water channels, which make their way down from the summit in a surprisingly regular manner (at least on the north side), giving the appearance of an opened umbrella with numerous ribs. From a single point of view I counted as many as thirty-four of these channels. It may be mentioned in passing that, in a valley at the west foot of Angavo, there is a small crater whose lips are level with the surface of the ground. This may perhaps be accounted for by supposing that the ejected materials from this and other craters near have so accumulated as to raise the level of the valley between up to the rim of the crater, and so obliterate the cone, probably never of any great height.

It is hardly necessary to say that these extinct volcanoes of Itasy must have been in activity in comparatively recent times. Possibly they belong to the historic period, though no tradition lingers with regard to their being in a state of eruption.\* That they are, at any rate, of recent date, is shown by the almost perfect state of preservation in which most of the cones are still found, and by the undecomposed (or slightly decomposed) character of the lava streams that have issued from them. There have been no terrestrial disturbances or modifications of any magnitude since the days of their fiery energy; the conformation of hill and dale was the same then as now, for, in every instance, the lava streams have adapted themselves to the form of the existing valleys.

Another feature worthy of mention in this volcanic district

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\* I was told by a native that near the village of Ambôniriana, north of Angavo, and not far from Ingolofotsy, there is an emission of gas (? *fôfona*), and that the people say that formerly fire was to be seen. The place is named *Afotrôna* (*âfo*, fire; *trôna*, grunting or hard breathing), and would probably be worth a visit.

is the lakes and marshes which occupy many of the valleys. Itasy is the largest of the lakes, and Ifanja the largest of the marshes. Now most of these lakes and marshes have been doubtless formed by the sinking in of certain portions of the district, a fact made evident by the two following circumstances: (a) on the south side of Kasige the gneiss may be seen distinctly to take a sudden dip beneath the volcanic pile, showing that, as the matter has been discharged from below, there has been a settling down of the cone, a fact made further evident by the existence of a small sheet of water, known as Bòbojòjo, in the immediate vicinity. But (b) on the western side of Ifanja marsh there is a small pond known as Mandentika. In the time of King Andrianampònimérina, so the people say, there was a headland projecting into this pond, upon which was situated a small village of two or three houses. On a certain unhappy day the foundations of this headland suddenly gave way, and down it sank with the village and its inhabitants, only one of the latter escaping. From that time the pond has been appropriately termed Mandentika ('sinking'), but previous to the catastrophe it was known as Amparhimbòahangy. There is no doubt about the truth of this story, as I have myself seen traces of the submerged headland and village appearing just above the surface of the water. The natives of the place say that the sinking was caused by a *fanànimpitolôha*, a seven-headed mythical animal that is supposed to live beneath the water.

Ifanja marsh is some four or five miles from one end to the other, and perhaps a mile or more wide in its greatest width. It runs in a northerly and southerly direction, with its southern end bending round towards the west, at the foot of which is the volcano of Amboditaimamo mentioned above. The marsh is 3700 feet above the sea, forming a considerable depression below the surrounding country, which is about 5000 feet in altitude. At its south-eastern corner there are some hot springs which are much resorted to by sick folks.

Lake Itasy is too well known to need any lengthy description here. It covers ground, roughly speaking, to the extent of about 25 square miles. It may not improbably occupy an area of depression due to volcanic action;\* but be this as it may,

\* Mr. W. Johnson says: "I am told here that Itasy was once a huge swamp, and that its becoming a clear lake is within the knowledge, or perhaps the traditions, of the people" (ANNUAL) I., 1875; p. 60. If this be really true, it can only be explained on the supposition that there has been a recent subsidence of what is now the bed of the lake, as in the case of Mandentika mentioned above.

Mr. Sibree says: "The natives say that the lake Itasy..... was formed by a Vazimba chieftain, named Rapéto, damming up a river in the vicinity, and so the rice-fields of a neighbouring chief, with whom he was at variance, were flooded and have ever since remained under water."—*The Great African Island*; p. 136.

there is a cause at its outlet sufficient to account for its formation. Here, lying in the river bed, may be seen numerous blocks of gneiss, many of them blackened with a covering of oxide of iron; and beneath this gneiss lava may be seen. Several volcanoes cluster round the outlet; but there is one,—an inconsiderable hill—situated on the southern margin of the outflowing river, just above the rapids. There distinctly enough may be seen a low and much-worn crater, with its breached side facing the outlet; and gneiss blocks may be traced from the bed of the river all up the hill-side to the crater. There has evidently been first an ejection of volcanic matter, followed probably by an explosion tearing up and flinging out the gneiss through which the vent was bored; hence the gneiss blocks are superimposed upon the lava. Thus the water has been ponded back. The river has now cut its way several feet through the barrier thus thrown across its course; and by this continual erosion at its outlet and the accumulation of sediment and the growth of vegetation at its head, the lake is slowly, though surely, decreasing in extent year by year.

It seems that lava also occupies the bed of the river further down, as Mr. W. Johnson says: "Went down the Liliá as far as the waterfall at Ambòhipò. A more beautiful fall I think I never saw. The river, broken into three streams, falls in foaming white masses over an edge of black lava some fifty feet deep. The whole bed of the river for a mile above is of the same black character, the lava broken in innumerable blocks and setting out in vivid colour the verdure of the river banks" (ANNUAL I., 1875; p. 52).

A good deal of what has been said respecting the volcanic district of Itasy also holds good in regard to that of the Betafo valley and neighbourhood, where, however, the volcanic cones are fewer, and where trachytic domes do not appear to exist. One of the volcanoes in the Betafo valley, Iavòko, is of greater dimensions and has a much larger crater than any to be found about Itasy. From this volcano a large sheet of basaltic lava has issued, upon which are found in abundance various species of plants, notably a *Euphorbia* and a stonecrop (*Kitchingia*). Almost all the plants growing on this lava bed, however, are of a succulent character, and can dispense with soil, requiring merely a foothold. On the sides of Iavoko may be picked up fragments of calcined gneiss, which have been torn from the sides of the vent in the passage upward of the volcanic matter. On some of the cones numerous crystals of augite as large as marbles may be found among the volcanic *débris*. There is one volcano, Tritriva, near Betafo,

which, inasmuch as it is different in character from any others mentioned above, deserves a few words. It is one of those volcanoes off which the summit has been blown by explosive action, leaving what is known as a crater ring, which is now the site of a small lake. The lake is not more than 100 or 200 feet in diameter, perhaps not so much as that; but there is reason to suppose that it is of very great depth. The inner sides are steep for the greater part of the circumference, but on one side the lake is easily accessible.

It is possible that when the country is more thoroughly explored, it may be found that the volcanoes near Itasy and those in the Betafo valley are connected by intermediate ones; indeed on Dr. Mullens's map several craters are shown somewhat west of a straight line drawn between these two volcanic districts.

To the east of Imerina, near Ambòhidratrimo, on the outskirts of the forest, I discovered, a couple of years ago, several small volcanic craters. These also seem to belong to the class of crater rings or explosion craters. Although fragments of volcanic matter have been ejected from them, they are not in such quantity as to form a cone; and the craters, none of which exceed 100 yards in diameter and 30 feet in depth, have been formed probably by a single explosion of the pent-up forces below. With the exception of scorix and lapilli, which are sparingly scattered about, there is no visible sign of volcanoes, and one may come to the very verge of the craters before being aware of their existence. Two of the largest craters consist of saucer-shaped depressions, but are rather elliptical than circular in form; the others consist mostly of small cavities, deep in proportion to their width. Several of the craters are occupied by sheets of water, with rushes and other aquatic plants around their margin.

Besides the volcanic phenomena mentioned above, thermal springs occur in various localities in the interior of Madagascar. They are found six or seven miles to the south-west of Lake Itasy; at the south-east corner of Ifanja marsh; at a place in the bed of the river Ikòpa about 45 or 50 miles north-west of the Capital (at the south end of the hill of Ankàdivàto in Valalafotsy; see map), and also a few miles further down the river; at Andranomafana (at the foot of Vavavato mountain); in the Betafo valley, where at one place the hot water pours out in great quantity; at Antsirabè, about 70 miles south-west of Antananarivo; and near the volcanic district of Betafo mentioned above; and probably also in other places. The following is an analysis by Dr. Parker of water from springs in the district of Antsirabè:—

"On evaporation, one pint (20 oz.) of water from each spring yielded the following quantities of solid salts :—

Spring No. 1 yielded 40 grains of salts, or 2 grains to 1 oz. of water.

"	"	2	"	38	"	"	"	1.9	"	1	"	"
"	"	3	"	42	"	"	"	2.1	"	1	"	"
"	"	4	"	28	"	"	"	1.4	"	1	"	"

All these springs contain the same ingredients, viz., lime, magnesia, soda, and potash, in combination with chlorine, iodine, sulphuric acid, and carbonic acid, with the addition of free carbonic acid gas."

At Antsirabe there is a deposit from one of these springs of carbonate of lime, which is occasionally used for building purposes in the Capital. Mr. Sibree says of it: "It has not yet been examined by any one with competent scientific knowledge, but it appears to be a sulphate of lime, and is probably only a local deposit and not a stratified rock, and most likely is connected with the subterranean action so visible all around the district." Mr. Sibree rightly conjectures that this limestone is merely a local deposit; it is not, however, sulphate of lime, but, as stated above, carbonate of lime, usually known as calc-sinter or travertine. Bubbles of carbonic acid may be seen rising from the surface of the deposit, and at one point, where there is a small spring, a mass of calc-sinter has been formed which, speaking from memory, is probably twelve feet high by eighteen feet long.

In one of the valleys in the vicinity of the crater rings of Ambohidratrimo spoken of above there is a deposit of siliceous sinter, sometimes called geyserite. It appears in one or two places, scarcely rising above the surface of the ground, in a valley of rice-fields, and has been deposited by springs which have long since ceased to flow. The sinter is exceedingly hard and compact and is used by the natives for fire-flints. They know it as *vàtofangàla*. In some portions of it numerous fossils of a species of *Equisetum* are embedded. The longitudinal striæ and the occasional joints leave no doubt as to the nature of the plant. The fistular stem has been filled in, and the vegetable substance entirely replaced by silex. The stems of some of these fossil plants are quite half an inch in diameter. Now the only *Equisetum* found in Central Madagascar at the present time is *E. ramosissimum*, but this never attains to such a thickness as the equiseta in the sinter; so that the fossil species have become extinct since the springs which deposited the geyserite were in a state of activity.

So little is known respecting earthquake phenomena in Madagascar, no scientific observations ever having been instituted, that it is scarcely worth while to refer to the subject. However, it may be stated that scarcely a year passes without

one or more shocks being experienced in Central Madagascar, though they are never severe or of long duration; and the destruction caused by these earth-waves in some parts of the world is entirely unknown here. The natives strangely imagine that earthquakes are caused by a whale (*trôzona*) turning on its back.

Sufficient has perhaps been said with regard to the volcanic phenomena of Central Madagascar; let us now therefore briefly notice a few facts concerning some of the plains of this part of the island.

And first of all with regard to Bêtsimitàtatra. This is a plain lying immediately to the west of Antananarivo and, at its furthest limits, stretching for a distance of about 20 miles north and south, and having endless windings and turnings among the hills. Formerly it was an extensive marsh, abounding in wild fowl; but King Radâma I. banked up the river Ikopa, which runs through it, and now it is almost entirely covered with rice-fields. In some parts of it a kind of peat, known as *fompotra*, is obtained from beneath the rice-fields. This, when first taken from the ground, is a black, heavy, moist mass, with little or no appearance of vegetable structure, but, when dried by exposure to the sun, turns to a brownish, light, and peaty-looking substance, which is used in burning bricks, but, owing to its unpleasant smell, it cannot well be used for household purposes.

At Antsirabe there is also a level stretch of country, which no doubt at one time was occupied by a sheet of water, since the remains of a hippopotamus, an animal now unknown in Madagascar, were recently discovered there by Dr. Hildebrandt in a sub-fossil state.

The largest plain in Central Madagascar, however, is that of Ankay, situated at the foot of the high ridge which forms the eastern boundary of Imerina. This plain, now cut and scored by the river Mangôro and its tributaries, forms the bed of an ancient lake. Examination of the deposits shows beds of sand, clay, shale, and ironstone, the latter existing in numerous layers of various thickness. Some time ago I found embedded in the ironstone and shale numerous fragments of fossil plants: the stems of what were probably sedges, leaves in abundance, and a depresso-globose fruit about the size of a small marble, five-celled and five-seeded. In some portions of the shale the fossils of leaves were exceedingly numerous, one of which I recognized as that of *Calophyllum parviflorum*, Bojer; and another, judging from its veining, seemingly belonged to the Natural Order *Melastomaceæ*, as it was very similar to certain species of

*Medinilla* common in the forest on the heights above. The bed of this ancient lake extends for a distance of probably 30 or 40 miles, running in a direction north and south between two lines of hills. Alaotra lake in Antsihanaka is perhaps the remnant of this ancient lake or, at any rate, one in serial connection with it.

A few words with regard to some of the metals and industrial products of the central region of the island, and I have done.

It is now pretty well known that gold has recently been discovered in somewhat large quantity in certain localities, and, judging from the nature of the rocks, will doubtless be found in others when the country is opened up. The Government, which retains the monopoly of the precious metal, has recently been obtaining it from Ampàsiria, a place about half-way between the villages of Malàtsy and Mévatanàna, on the road to Mojanga. Small quantities have also been obtained from the bed of a stream near Itòmpoanàndràriny, west of Valalafotsy district, and also near Tànjombàto, a mile or two south of the Capital, and perhaps in other localities as well. The gold is said to be of excellent quality; at present, however, the laws forbid both the search for it and the sale of it, although by no means all finds its way into the national treasury. Silver as yet does not seem to have been discovered. Galena is found abundantly somewhere in the neighbourhood of Ankaratra; but whether it be argentiferous or not, I cannot say. The natives obtain their lead, which is used chiefly for bullets, principally, if not entirely, from this galena. Tin is as yet unknown. Copper exists apparently in great quantity in Vakin' Ankaratra. Iron is found, as has already been stated, in abundance as magnetite; also as hematite and ironstone. Sulphur occurs in beds near Antsirabe in the neighbourhood of extinct volcanoes. It is brought to Imerina, where it is separated from its impurities by a rough process of sublimation. It is used here in the manufacture of gunpowder. Nitre or saltpetre is obtained by lixiviating the soil (the decayed gneiss) and allowing the solution to crystallize. There is no special locality whence the nitre is obtained, though the natives say that certain soils, probably those rich in nitrogenous matter, yield it in greater abundance than others. Graphite and iron pyrites, as has been stated above, are found in various places. Mr. Ellis says that oxide of manganese has been found about 50 miles south of the Capital. Lime is obtained from the deposit of travertine at Antsirabe, but as yet it seems only to have been employed in the erection of the Queen's palaces and a few other buildings. A kind of ferruginous clay (kaolinite), chiefly decayed felspar,

and known as *tanimanga*, now much used for roofing-tiles, is obtained in many places, but it seems that it is not of very excellent quality for this purpose. This perhaps is owing to the large proportion of iron present. Tourmaline, corundum, sapphire, spinel, etc., are also found.

From what has been stated in the preceding pages it will be evident that the central portion of Madagascar must be classed as one of those extensive regions known as metamorphic, that is to say, that it consists essentially of gneiss, mica schist, clay-slate, hornblende-rock, chlorite schist, quartzite, plumbago, crystalline limestone, and other crystalline rocks. It may be, indeed it is more probable than otherwise, that, when the geology of this part of the country has been more thoroughly investigated, these crystalline or metamorphic rocks, of which we have been speaking, will prove to belong to the Archæan series, that is, to the very oldest known on the geological record.

In conclusion, I have only to express my regret at the fragmentary and imperfect character of the present paper. It only professes to deal in a general way, as its title indicates, with some of the more prominent features of the geology of the interior of Madagascar. Some of the statements made in it, it is not unlikely, when the region has been more thoroughly examined, will require to be modified, perhaps cancelled. This, however, is my apology: so far as I am aware, not taking vague and fragmentary notices into account, this is the first paper that has ever appeared devoted specially to the subject.\* At some future time I hope to be able to give further and more exact particulars, and to avoid some of the errors that must have crept into this first attempt. But, as was said at the commencement, until the region is explored and surveyed by practical and competent men, we cannot hope to see the geological structure of the country properly unravelled, or its phenomena fully explained.

R. BARON (ED.).



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\* See, however, a paper of mine entitled "Observations on the Physical Geography and Geology of Madagascar," with Physical Sketch-map, in *Nature*, Aug. 14th, 1879, pp. 368-372, and forming ch. ii. of *The Great African Island*. But this covers a wider range in two directions, and has no pretensions to the minute personal observation which gives value to the preceding paper.—J.S. (ED.)



## THE ANCIENT IDOLATRY OF THE HOVA.

IN the first number of the ANNUAL (Christmas, 1875) there is a very interesting article by the Rev. W. E. Cousins on "The Ancient Theism of the Hova," in which the writer clearly shows that "alongside of all the superstitious practices that had gained a footing among the people, there still existed the tradition that the primitive religion had been a simple theism;" and although this theism was undoubtedly meagre and inadequate, yet "it presented a nucleus of elementary truth around which the fuller and grander teachings of God's Word were hereafter to cluster." Mr. Cousins then proceeds to show how, when the first missionaries arrived, not only was the "name of God well known and commonly used, but that there existed also some knowledge of His attributes."

It has always been an interesting point with myself, along with many others, to find out, if possible, the connection in the minds of the natives between this Andriamànitra ('The Fragrant Prince') Whom the Hova have known, and in a sense acknowledged, as the one true God, for generations, and the idols in whose power they had, until recently, such profound trust. Very frequently have I had conversations with the more intelligent native Christians on the subject, never, however, getting very satisfactory or clear replies from them.

During this year, 1885, I have been engaged in writing, in the native language, what is, I believe, the first history of the Church of Christ in Madagascar, or, it would be more correct to say, in Imérina and one or two adjoining provinces; and I was naturally anxious to give completion to the history by a chapter clearly stating the character of the religion professed by the people prior to the introduction of Christianity by the first missionaries. I therefore applied to Andrianaivoravèlona, the intelligent native pastor of the town church at Ambônin' Ampamarinana, and asked him to write me an account, so far as he knew, of (1) the ideas the people had of this God Whom they had known so long; (2) the introduction of the idols into Imerina; and (3) the character of the people's trust in their idols. This he did in a remarkably clear paper, which has been published in Antananarivo and has excited a good deal of interest.

I have been requested by the editors of the ANNUAL to translate it into English for insertion in the present number of their most useful magazine. This I have done, and the translation is given below. I will venture to make two requests of the reader:—(1) to read it in connection with Mr. Cousins's article previously alluded to on "The Ancient Theism of the Hova;" and (2) to remember that it is very nearly a literal translation. I have preferred that it should be this, thus leaving the native idioms and forms of expression to speak for themselves, rather than to have it in perfectly smooth English. I would also say that I dare not endorse all the writer says of the virtues of the ancient Hova, the forefathers (*razana*) of the present generation; if they were all he describes them to have been, they were a truly wonderful people; but this must be taken with the usual 'grain of salt.'

HENRY E. CLARK.

TRANSLATION.

"THERE have been idols in Imerina from the days of Andrianampoinimerina to those of Rasohèrina,\* but when Rānavālomanjaka II. came to the throne, the idols of her predecessors were burned, for she became a Christian, and rested her kingdom upon God. So when the people saw this, they all burned their idols and made an agreement with the Queen that there should be no more idol-worship in this kingdom.† And if the history of the idols is written, it must be divided into two heads:—(1) The introduction of the idols into Imerina,—From whence came they? (2) The opinion of the people concerning the idols,—What did they think them to be?

"1.—The introduction of the idols into Imerina,—From whence came they? According to tradition,—yet we know it to be true, besides it is not so very long ago—the Hova had formerly no idols at all, but it was the Sākalāva and other distant tribes who had them. Andriamanitra Andriananahary,—two names now used for the true God—was trusted (lit. 'rested upon') by the forefathers of the Hova, and righteousness was what they loved best; and upon this trust in God alone they depended for help. They believed in the true God, and they feared and honoured Him very much. The numerous proverbs and sayings which exist at the present time, and which will long exist, are evidences of this; these are some of them:—'God is round about (us).'<sup>†</sup> 'Do not think that God is not, and therefore jump with your eyes shut.'<sup>‡</sup> 'God, for whom others wait not, I wait for.'<sup>§</sup> 'God does not belong to only one.'<sup>¶</sup> 'Human beings are God's little dogs.'<sup>\*\*</sup> 'If two go together, one can be a witness concerning his fellow; but if one goes alone, God is the judge.'<sup>††</sup> 'Be strong that you may be helped by God Who strengthens.'<sup>‡‡</sup> 'Let not God be blamed, let not the Creator be censured; for it is men who are full of twistings,' i.e. tortuous evil ways.<sup>§§</sup> 'God does not love evil.'<sup>|||</sup> 'The reason why the simple are not to be deceived is God is to be feared.'<sup>¶¶</sup> 'Think not of the silent valley (i.e. as affording an opportunity for committing some crime), for God is over head.'<sup>\*\*\*</sup> 'Though I should not (be able to) reward your kindness, it will be rewarded by God.'<sup>†††</sup> 'God is everywhere.'<sup>‡‡‡</sup> 'God made (us) with feet and hands.'<sup>§§§</sup> 'I am dying, O God (my) Creator.'<sup>||||</sup> 'Do not say God is fully understood by me.'<sup>¶¶¶</sup> 'To be punished by God at the last is what cannot be endured.'<sup>\*\*\*\*</sup> 'It is better to be held guilty by men than to be held guilty by God.'<sup>††††</sup>

"In all these, and many more like them, it was not the idols that were alluded to, but the one God, Who exists eternally and is the author of all blessings, even He only was thought of in these proverbs. Also the forefathers of the Hova loved righteousness; they thought much of friendship and brotherly love; they blessed and gave benedictions continually; they respected and honoured each other; they always liked to do good. They

\* Andrianampoinimerina reigned from 1787 to 1810, and Rasohèrina from 1863 to (April 1st) 1868.

† It should be understood that this only applies to the central provinces of Madagascar, and even in parts of them it cannot yet be said that there are no idols.

‡ Andriamanitra eny ho eny hiany. § Aza manao an' Andriamanitra tsy hisy, ka mi-tsam-biki-mikimpy. || Andriamanitra tsy andrin' ny olona, andriko hiany. ¶ Andriamanitra tsy any ny irery. \*\* Ny olombelona amboakelin' Andriamanitra. †† Mandeha roa sahalain' olombelona; mandeha irery sahalain' Andriamanitra. ‡‡ Matanjatanjaha homban' Andriamanitra manatanjatanjaka. §§ Andriamanitra tsy omen-tsinny, Zanahary tsy omen-pondro; fa ny olombelona no be siasia. ||| Andriamanitra tsy tia ratsy. ¶¶ Ny adala no tsy ambakaina, Andriamanitra no atahorana. \*\*\* Aza ny lohasaha mangingina no heverina, fa Andriamanitra no ambonin' ny loha. ††† Na tsy valiko aza, valin' Andriamanitra. ‡‡‡ E! Andriamanitra amin' izao tontolo izao. §§§ E! Andriamanitra nahary tongotra aman-tānana. |||| Maty re aho, Andriamanitra Andriananahary ô! ¶¶¶ Aza manao Andriamanitra azoko am-po. \*\*\*\* Ny hovalian' Andriamanitra any am-parany any mantsty no tsy ho tany. †††† Aleo meloka amin' olombelona toy izay meloka amin' Andriamanitra.

abstained from abuse and lies ; they did not do injury one to another ; they avoided stealing and oppression. And the reason of all this was their belief in a just God, Who judges all people and will certainly requite their sins in the end, even if He waits long before doing this.

"Therefore we see that the forefathers of the Hova certainly had no idols, but the Sakalava, who have always been their enemies, had them. And these Sakalava were led astray by their trust in their idols, and were not afraid of death when they fought with the Hova. And in the days of Andrianampoinimerina, when the two tribes were at war, the Sakalava trusted in their idols, and rushed down like mad dogs and smote and conquered the Hova. But the latter, on the other hand, had nothing visible to incite them to fight ; therefore they trembled and became foolishly confused, and so were conquered. And when the Hova examined into the reason of the wonderful strength of the Sakalava, they concluded that it was the idols or gun-charms which made the Sakalava strong. And when Andrianampoinimerina saw that the Hova were defeated through fear, he took counsel as to what he should do ; and this is what he did : He said to his soldiers : 'I also have a gun-charm that cannot be pierced by shot, and if the enemy shoot at me, then I will seize the bullet in my mouth, and it will not hurt me at all. Let us go,' he said, 'and I will exhibit it to you.' Then he told his servant what to do ; he was to shoot him, but not to put any shot in the gun. And when all the soldiers were gathered together to see what was to be done, he showed them the ball and said : 'Behold the ball to shoot me with, and look you, for I will catch it in my mouth.' Then the king gave the ball to his servant, but he had another one exactly like it ; and the servant, when he loaded the gun, pretended to put the ball into it, but slipped it aside, and hid it. And the king secretly put the ball which he had kept into his mouth ; and when the servant took the gun to shoot him, the king looked straight at him, and just when the gun was going off, he opened his mouth and shook his head as if he were going to catch the ball, then he shut his mouth again very quickly. Then the soldiers were ordered to come near, and the king said : 'Spread out your *lamba*, for I am going to put out the ball ;' and then he put it out. And when all the soldiers saw this, they cried out saying : 'Certainly this gun-charm of the many-eyed bull (a name given to Andrianampoinimerina) is sacred (*masina*).'\*

"And when the soldiers went to fight, they all came to the king and said : 'Give us a gun-charm, Sir, for we are going to fight.' Then he gave them small pieces of wood or other similar things ; he also warned them as to what they were to abstain from, and gave them encouragement and cheered and blessed them, and sent them off to fight. Thus they had confidence and were not afraid any more, so that when they saw the enemy, they poured down upon them like fierce lions and did not fear death. But the Sakalava, their enemies, on the other hand, when they saw them become brave like this, were astonished ; they looked here and there foolishly, and were overcome by fear and thrown into confusion. Thus the Sakalava were conquered by the Hova, and the few who were not killed ran away. And it is very plainly to be seen from this, whether with the Sakalava or the Hova, that it was not the idols or gun-charms that were powerful, but it was the boldness and confidence with which they conquered their enemies. And it is like this now, and always will be like this, for confidence and bravery are the root of power. When God fights for those who are weak but have a just cause, it is help given by Him to the weak ; but, from a human point of view, those who conquer must be brave and have confidence.

"And when any of the soldiers who possessed those bits of wood and other

\* *Masina* probably here meaning 'invulnerable' rather than 'sacred.'—EDS.

things which gave them confidence in the time of Andrianampoinimerina were wounded or even killed, it was said that they had partaken of something forbidden (by the idol), and that that was the cause of their being wounded, or of their death. But if, on the other hand, those who had the charms were not hurt, but came off victorious, they kept the bits of wood very carefully and anointed them with castor-oil, and considered them to be sacred, and then they became idols to be prayed to. As to where the idols of the Sakalava and other distant tribes came from, we cannot tell. But what has been told above is a true account of how the Hova first obtained them, because they saw the Sakalava who possessed them were strong and brave to fight, they became very anxious to obtain them also; yet they did not take them from the Sakalava or from any of the other tribes, but those which Andrianampoinimerina gave them were sanctified to be their idols.

"And later on, when the wars of the Hova extended to other tribes, their belief in idols increased, and they not only made idols for themselves, but bought them from the other tribes. Then came the famous ones called *Rakelimalaza* ('Little yet famous'), *Ramahavaly*\* ('One who is able to answer'), *Rafantaka* ('The clever one'), *Imanjakatsirôa* ('There are not two Sovereigns'), and others also, which all became Government idols; and the love and veneration of the people for the idols increased very much indeed. And the number of them increased also, for besides those belonging to the Government, almost every clan and tribe, every large town, and every household, had their own idol.

"This then was the beginning of the idols in Imerina and their subsequent increase, even a little in the beginning, but it became a folly which filled the whole land.

"2.—The opinion of the people concerning the idols,—What did they think them to be? and what was their reason for making them?

"(a) And when we think of the opinion of the people concerning the idols, it may be said to have been this: They did not consider them to be God, but only idols; yes, even the Sakalava and the distant tribes, who had them long ago, and especially the Hova, who more recently adopted them, did not look upon the idols as God. For all of them believed that there was only one God, even God Who created the heavens and the earth and all things therein, and Who gave feet and hands to people, and from Him only is life and all other blessings. And all these tribes clearly understood that the idols were not God Who had power to create, but only idols that they had made or bought from other people. They saw that they were made of wood taken from trees, therefore still only wood; and they also knew that wood is liable to become rotten, or to be burned or spoiled or lost, and could then be renewed; so they made a proverb about them which says: 'For the woodman who has lost his idol, to get a new one is the quicker,'† that is, quicker than searching for the old one. Therefore they did not think the idols to be God, but wood, yes, wood only; but when they were consecrated by being anointed with castor-oil, or by the presentation of a little money, or the offering of incense, then they became powerful or sacred, and it was thought that some kind of spirit entered into them, and thus they became sacred. And then they thought that the idols had power to bless those who obeyed and honoured them, and to hurt those who transgressed any of their laws. The people did not believe the idols to be God, but they did believe them to be sacred and to have power. And not very different from this were their ideas about the Vazimba (the reputed aborigines of the interior), and the

\* For a most interesting account of the burning of this idol, see ANNUAL No. I, p. 107.

† 'Ny tanala very sampy, ka ny manova no haingana.'

mountains and the rocks and the trees, and the earth and the sky, and the sun, moon, and stars, etc., etc.,—they thought that in all these there was a kind of spirit which made them sacred and gave them power. And of their *ràzana* (forefathers), though they said: 'They are gone to be gods,' they did not mean that they had become God, but spirits, and therefore had some qualities which God has; and so they accounted them to be sacred and powerful almost like God. And they thought that it was God only Who made efficient and powerful all their different sacred things; and this was why they prayed to them.

"(b) The reason of their making the idols, - What was it? Because they believed them to be sacred, and that they had power; so they rested upon them for protection, and they trusted to them for obtaining what they wanted. And when they obtained any blessing from God, or protection from danger, or received something they specially desired, then the idols were presented with a thank-offering, as a proof of their reverence and regard for them. But when, on the other hand, they got into danger and trouble, they repented before the idols and asked pardon from them, because they thought that they had offended them, and that that was the reason of the trouble that had come upon them.

"But from what did they wish to be protected by the idols? And what were the gifts they wished for, the obtaining of which was the reason of their trusting them? Gun-charms, - this was the commencement, as we have related, and they expected not to be wounded when shot at by the enemy. And after this the number of things they sought protection from in this way increased very much, for they made hail-charms to protect their rice from the hail, sickness-charms, charms to make rich, charms to ward off certain diseases supposed to have been caused by witchcraft, horn-charms (charms taken by ox-wrestlers to prevent the oxen from goring them), etc.

"And when these charms increased in number like this, mutual distrust also increased very much amongst the people, so that they made many other charms as a protection to their persons from those who were their enemies, and as a means of destroying those who hated them. Then appeared a great many bad charms, such as the following:—*ôdi-fitia* (a love-charm); *ôdi-fanô-nibé* (a charm to prevent those who have been robbed from following the thief, or to frighten them from prosecuting); *ôdi-fânjambàna* (a charm to produce blindness); *ôdi-fônoka* (a charm used by thieves to induce sleep, whether in people or watch-dogs); *ôdi-mosàvy* (a charm to protect from bewitchment); *ôdi-tadilàva* (a charm to ward off a certain disease which is supposed to be produced by other charms); *ôdi-vòrika* (a charm which was used in cursing a person at a distance, and was supposed to result in his death); *ôdi-manàra-mbôdy* (a charm used to cause serious illness or immediate death to a person on his return home from a long journey); *ôdi-hitsak'àloka* (a charm through the influence of which a person would die if only his shadow was trod upon); *ôdi-sàrik'âtty* (a charm used in transferring land).

"But by the manifestation of the grace of God, to save the souls of the people and to preserve the kingdom, Rànavàlomanjaka II. being anointed Queen, and Raininilaiàrivôny becoming Prime Minister and Commander-in-Chief, the famous idols which belonged to the Queen's forefathers were burnt, with all the idols of the kingdom; and the people also wished to burn theirs. And the Queen, with all the Christians, strove with all their might to forward the Gospel, and then only was the trust in the idols stayed.

"This then is what I have to tell of the history of the idols in Imerina from their first appearance until now, but we do not know what will be their position in the future; nevertheless, if we are Christians, we must believe that the word of God about them will be fulfilled: 'And the idols shall utterly pass away' (Isa. ii. 18)."—J.A.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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### AN UNDERGROUND RIVER.<sup>x</sup>

MANY years ago the late Mr. James Cameron stated in my hearing that there was, among the valleys west of the Ankàratra mountains, a river which, at a certain point in its course, disappeared among some rocks. No details were given, and frequent enquiries of the people from the neighbourhood did not elicit other than very vague accounts of what was evidently regarded as a strange freak of nature. But, lately, having a leisure day when within a few miles of the place, I determined to gratify my long unsatisfied curiosity.

With a lad to guide us, my men soon took me over the intervening downs, till we approached the deep valley of the Antsèsika river and stood on a bold headland of rock above it, gazing into its depths, where we expected to see that river flowing. We were but 250 feet above the bottom of the rocky gorge and could clearly see every object there, but there was no sign of water, nor, looking up the valley, was any to be seen. Turning, however, to the north, the river appeared some distance below and flowed on past well-known fords. From that point upwards, and forming the bottom of the valley, what would otherwise have been its course was like the dry bed of a mountain torrent, full of large boulders, which appeared to have entirely filled up a very narrow chasm between the steep sides of the valley, in section almost like the letter V.

Not satisfied with a distant view, we determined to get down. It was not easy work, and we were constantly brought up sharp by sheer descents of rock, which even the men's bare feet could not traverse. One of them, more venturesome than the rest, went ahead to find a path, but in a few minutes he was completely lost to sight and sound, for, shout as we would, he could not hear our questions, and only a loud echo from the opposite hill side replied to them. After a time he seemed to have found a path, but his voice from below sounded as if half a mile off, so steep was the face of the hill we were descending.

At last we reached the bottom, but there was nothing to indicate the presence of water. Clambering along as best we could, we made our way southwards up the valley. What had appeared from above as ordinary boulders proved to be enormous masses of gneiss, ranging in diameter from seventy feet downwards, and piled one on another in strange confusion. To the right, just ahead of us, the hill, down the side of which we had come, rose as a mighty precipice arching over our heads



a hundred feet above. The lower portions had evidently broken away and filled up the valley below. We peered among the boulders into holes and caves, the blackness of whose depth made us shudder. Stones thrown in, bounding from side to side, only made the depth more apparent, as we listened for a final splash to indicate water at the bottom, but no such sound was heard; no murmur of water reached our ears, nor was there any sign of its existence, yet we knew that the river was somewhere down below, forcing its way in the darkness. It must have been at a great depth.

On and on we clambered under the burning sun, but not until we had gone nearly half a mile did any trace of the missing river appear; and there a tiny rill from the west made its way among the rocks and disappeared at a place where the boulders were smaller and less numerous, and from the midst of them rose on the ear a faint sound as of a surly distant roar.

Soon after this we came to a deep black hole, one edge of which was defined by a slab of stone which had shelled off the boulder above and so afforded a natural parapet which enabled us to gaze into the depths without fear. Again we hurled stones into the blackness, but they went the way of all the others and left us no nearer our quest. So we went on, here resting for a few minutes in the delicious coolness of a cave formed by several meeting boulders, with a tiny stream trickling over the sand to be lost in the darkness (one such cave, they say, would hold thirty cattle); there passing a pleasant pool of clear water fed by another runnel from the hill-side and overflowing to the lower regions, till at the end of a mile we came upon our lost river, plunging and foaming down among the rocks, not to be seen but by climbing upon the enclosing boulders and looking down where it found a way ten or twelve feet below the surface. But it only appeared for a moment to be lost again.

We were, however, drawing towards the end of our labours, for, rounding one more turn of the hill, we could see the river following its natural course where, within a quarter of a mile from the ford below a prominent cone of gneiss known as Tsiäfakambòà ('Not-climbable-by-dogs'), a pair of boulders narrowing the stream to a width of four or five yards, forms an appropriate gateway to this eerie valley. The river, in common with all those in these high valleys, is very rapid, and a stone's-throw within this gateway it dives among and under a heap of boulders, to be lost to sight and sound, except as above related, for, I suppose, a mile and a quarter. "Rightly," remarked one of the men, "do they call this river the 'Antsesika' ('That which is thrust in')."

We noticed at this, the higher end of the valley, a considerable sediment of mud, now dry, shewing the limit of floods in the wet season, when the river must rise to a depth of fifty feet and stand as a lake, the water not being able to get away as fast as it comes down from beyond Ankaratra.

This valley lies about five miles south-east of the village of Isaha and about eight south-west of that of Manalalondo, being near the village of Anjāzamadinka. A few miles below Isaha, the Antsesika joins the Manalalondo close to its junction with the Kitsāmbi, which is one of the most remarkable rivers of Central Madagascar. It rises in Inānobè, the extreme south end of the range of mountains of which the Ankaratra peaks form the northern limit. After several minor falls in its upper course, it descends in the space of rather more than a mile some three hundred feet into the Isaha valley by a series of falls which are well worth a visit. The uppermost one is very beautiful, with cascades of foaming water above a final deep plunge into the green pool below. The height altogether is about fifty feet. From this, as by a natural staircase, the river winds down with many leaps between steep hills, which in places stand almost vertically over it, till it reaches a cliff of basalt, over which it throws itself in a fall of 45 feet into a fine spacious basin enclosed on two sides by vertical walls of rock. A mile below this is a third equally large fall, where the basalt has broken away, leaving an over-hanging brow of black rock, in every crevice of which ferns and flowers find a foothold. The river now enters a deep valley, and for the next thirty miles lies several hundred feet below the general level of the surrounding country, before it passes out into the lower level of 'No-man's-land' to the west.\*

WM. JOHNSON.



## THE NEW MALAGASY-ENGLISH DICTIONARY. X

THE completion and issue during this year of so important and valuable a work as a new dictionary of the Malagasy language† seems to call for a somewhat fuller notice in the ANNUAL than can be given in a short paragraph in our usual "Literary Notes." I wish that

\* The spot where the remarkable disappearance of the river above described takes place is shewn in the accompanying map kindly supplied by Mr. Johnson.—EDS.

† *A New Malagasy-English Dictionary. Edited and re-arranged by the Rev. F. Richardson, Head Master of the L.M.S. Normal School, Antananarivo, etc. etc. Antananarivo: the London Missionary Society. 1885; pp. lix. and 832.*

some one more competent as a Malagasy scholar than myself had consented to write an article on the subject; but having been unable to get such help, I somewhat reluctantly undertake it rather than that there should be no review at all in the present number of the *ANNUAL*. I feel also that, having taken some small share in the preparation of the new Dictionary, any praise for its merits or criticism of its defects would have come much more appropriately from one who was altogether an outsider and had had no share at all in its production. Still, as my contribution was of a quite subordinate character, and only slightly affects the merits or demerits of the work as a whole, I hope it will not be considered as unbecoming if I offer a few remarks.

The subject of Malagasy Dictionaries generally was treated of in our last number by the Rev. W. E. Cousins;\* so that it is unnecessary here to say anything as to the history of Malagasy lexicography, or to trace the various stages by which, very soon after Madagascar became known to Europeans, vocabularies of the language were compiled, and materials for a dictionary of Malagasy have gradually accumulated up to the present day.† We owe to De Froberville, Dumont D'Urville, Dalmond, Freeman and Johns, and the Jesuit missionaries, the chief contributions towards our knowledge of the vocabulary of the Malagasy language; and we are now indebted to Mr. Richardson for a book which is a great advance upon all its predecessors.

I shall first point out some of the many excellencies of this new Dictionary, and shall then offer a few remarks upon some of its deficiencies, together with a suggestion or two as to what may still be done towards a more perfect collection of the words which make up the speech of the Malagasy people.

Among the merits of the new Dictionary, which will occur to most readers on their first inspection of the book, is the excellence of its printing and clearness of arrangement on the page. Although the type is necessarily somewhat small, the different kinds used,—Roman, Italic, Clarendon, small and capitals, etc.—are so distinct that the purpose of each is seen at a glance, so that the book is most pleasant and easy to use. In this respect the new Dictionary forms a marked contrast to the perplexing and annoying mixing up of Malagasy and French, and the want of spacing and of variety of type, in the dictionaries of the Jesuit missionaries; and its execution does great credit to Mr. Parrett, as superintendent of the L.M.S. Press, and to the native lads by whom, although unacquainted with any language but their own, the manual and mechanical part of the work has been performed. The three different forms in which the book is issued have each their peculiar advantages. Although there are nearly 900 pages, the crown 8vo thin paper edition forms a most portable and handy book and can easily be taken with one on journeys; the thick paper edition will lie on the study table for constant reference; while the demy 8vo edition, with its wide margins and hot-pressed paper, has a handsome appearance and affords plenty of space for notes and additions.

\* *ANNUAL* No. VIII., pp. 43-52.

† See *A Madagascar Bibliography*; pp. 56, 57.

But not only is the printing of the new Dictionary a great improvement upon that of all its predecessors, but the arrangement of the words according to the roots is also much more systematic and clear than in any former book. All who remember their early experiences when learning Malagasy can recall how they were annoyed by the deficiencies in the tables of the verbs in *mam-* and *man-*, when searching for the root of some puzzling relative form, and how the chances were that the root they wanted was *not* to be found there. No doubt the lists of these verbs at pages 410—413 and 415—423 are not absolutely perfect, but they are a great advance towards perfection; and the systematic way in which the derivatives are arranged under the roots renders the study of the language, so far as the finding of words is concerned, as easy as it probably can be made. The accentuation of every word is also a great gain, and will prevent many awkward mistakes in the pronunciation of Malagasy; although, as the diphthongs are always long and therefore accented, we think they might have been left unmarked.

Coming, however, more to the substance of the book, the new Dictionary is far more full and complete than any dictionary previously issued. Many hundreds of words are included which one will look for in vain in Freeman and Johns's book, as may be easily seen by comparing a few of the pages of the new work with those of the older one; and especially is it fuller in the compounds, which are such a feature of Malagasy, and by means of which the comparative poverty of the language in certain lines is largely compensated for. And not only have we much more fulness of vocabulary, but we find here abundance of material for studying the component parts of the language. For the first time we can trace in a Malagasy dictionary how Arabic has contributed to the superstition and the earlier civilization of the people; how Swahili has affected the dialect of the western tribes; how preponderatingly the different Malayan, Polynesian, and Melanesian languages have contributed to form the ground-work of Malagasy; and how the French and English languages have added, and are still adding, to it numbers of words connected with modern civilization, the useful arts, education and religion, etc. Much still remains to be done in tracing the origin of numerous words in the language, and especially do we need a fuller critical examination of South African tongues and of those of Malayan and Oceanic stocks; but a large number of roots have already been identified, and to Mr. W. E. Cousins we owe much information as to the Malayan and Polynesian affinities of Malagasy; Mr. Vice-Consul Pickersgill has given us the benefit of his residence on the north-west coast of the island, and has contributed a number of Swahili words which, through Arab traders, have become current among the Sakalava tribes; while to the scholarship of the Rev. L. Dahle (in a former contribution to this ANNUAL\*) we owe the identification of the Arabic element in the language.

Mr. Richardson has also been able to embody in his Dictionary not merely and more fully the Hova form of Malagasy, but he has given us much more than has ever been given before of the non-Hova dialects,

\* ANNUAL No. II., pp. 75-91.

which are only very scantily represented in Freeman and Johns's work, although more completely in the *Malgache-française Dictionary* of the Jesuit missionaries. Advantage has been taken of the numerous journeys made of late years in distant parts of the island to embody lists of provincial words, either entirely different from those used by the Hova, or used in a different signification. The new book has therefore much more claim to be a *Malagasy* dictionary than that of the former L.M.S. missionaries, which was more strictly a *Hova* dictionary, with only a small proportion of provincial words. Much, however, still remains to be done before we can be said to have a complete dictionary of Malagasy, in the widest sense of the word.

While the philologist will find this Dictionary full of interesting material, the scientist will also gain fuller and more accurate information as to the flora and fauna of Madagascar, as shewn by its vocabulary, than can be found in any other book yet published. The most valuable addition in this direction has been made by the Rev. R. Baron, who has supplied the native names of about 2000 trees and plants, together with their scientific names and much information as to their economic uses, and also many curious facts as to popular superstitions connected with plants. The greater portion of these names are new to the *Malagasy* dictionary.\* The present writer has endeavoured to identify the native names of the avi-fauna and other animal life of Madagascar, as far as it has been scientifically described, although much still remains to be done in the identification of the names of fish, reptiles, mollusca, and insects. Considerable use has been made of a list of Malagasy birds, with native names in different dialects, prepared by the Rev. W. D. Cowan, but largely due, we believe, to information supplied by the late distinguished German traveller and naturalist, Dr. J. M. Hildebrandt. In place therefore of the vague definitions found in former dictionaries of 'Name of a bird,' or 'Name of a plant' or 'tree,' a considerable amount of accurate information will be found in this new work upon the vegetable and animal life of Madagascar.

The new Dictionary will also be found to be full of interesting particulars on such points as those called by Abp. Trench "morality in words," "poetry in words," and "history in words." Malagasy is very rich in figurative and poetical words and phrases; and a very slight examination of the Dictionary will shew how much light is thus thrown upon the habits of thought of the people. We also find numerous examples of words of a figurative character used for death, disease, calamity, etc., when speaking of royal personages or chiefs, instead of those usually applied to the people at large, a peculiarity Malagasy shares with all the Polynesian languages. This Dictionary is also a kind of museum of old-fashioned words connected with idolatry, divination, and superstition generally, many of which are obsolete or obsolescent in the central

\* We wish, however, Mr. Baron had given us a little more *popular* description of many of the trees and plants,—as the colour of flowers, peculiarities of foliage, size, etc.—by which a non-scientific reader might have readily identified them. For instance, the occasional use of the word 'shrub' for what, to ordinary people, appears very like a 'tree,'—as the *amiana*, *hàrina*, etc.—is rather perplexing. No doubt Mr. Baron is correct, scientifically, but then we are not all of us, scientific botanists.

provinces; it embodies great numbers of words referring to folk-lore and old customs; and it also contains much curious information in the names of birds and animals, the words for which throw light upon the Malagasy power of observation of their habits and characteristics; while the examples of tribal and place-names, and those for relationships and for describing natural phenomena, are also very suggestive. On all these points a careful examination of the Dictionary alone would supply materials for many papers of great interest which might be entitled "Studies in the Malagasy Dictionary." And it is also a matter of course that it is full of illustrations of grammatical points, such as the use of the infix, groups of allied words having slight euphonic changes, examples of onomatopœia, etc.

We must not omit to notice that the value of this Dictionary is greatly increased by having prefixed to it Mr. W. E. Cousins's *Concise Introduction to the Malagasy Language*, which has been carefully revised and in some parts rewritten, so as to embody the results of investigations into the language since the *Introduction* was first published, some twelve years ago.

Coming now to a few points in which we have to offer some criticisms, we have to notice first that the new Dictionary is still far from complete, not only as regards provincial words, but also in those still more or less in use in Imerina. For this, however, Mr. Richardson is not altogether responsible, for the Dictionary was carried through the press, especially during the last few months, at a speed which certainly was a great disadvantage to its accuracy and completeness. But this was done in order that it might be finished before Mr. Parrett left the island, his period of service having been already more than completed. A few more months' preparation would have undoubtedly made the Dictionary a more accurate and perfect work. Mr. Richardson has, it is true, given notice in the preface of his having left instructions for a number of publications in the Malagasy language to be carefully examined, during his absence from Madagascar, for words still absent from the Dictionary. For there can be no doubt that a thorough examination of such books as Mr. Dahle's *Specimens of Malagasy Folk-lore*, *The Publications of the Malagasy Folk-lore Society*, *Ny Ohabolàn' ny Ntaolo*, the yearly volumes of *Tény Sôa*, the reports of the Congregational Unions of Imerina and Betsileo, and other pamphlets, would yield a large number of additional words and phrases. We hope Mr. Richardson will return after his furlough in England to complete this work, but it would have been much more satisfactory had this been done before the Dictionary was printed, instead of having these additional words in a separate publication.

There can be no doubt also that there are still a large number of provincial words,—Betsileo, Sihànaka, Sakalava, Betsimisàraka, and others—which have yet to be included in a Malagasy dictionary; but here again Mr. Richardson is not to blame, but rather those who have lived for some time in the outlying provinces, and who have not taken the trouble to collect words or to send them when collected. In this matter we think Mr. Richardson has reason to feel disappointed at the very slight response made to his appeal sent, we believe, to almost

every foreigner known to be resident in the island and asking for help in this matter. A glance at page viii. of the preface will show that missionaries and others resident in the non-Hova provinces have not contributed any lists of provincial words for this work, although it was confidently hoped that many would render help in this way.

In another point we are inclined to think that Mr. Richardson has made a mistake, and that is, in not giving more exact information as to the locality of provincial words. All non-Hova words (except those of trees and plants) are here given simply as 'provincial;' we think it is to be regretted that, wherever possible, they were not localized much more exactly, as 'Betsileo,' 'Sakalava,' etc., or, at least, as 'East Coast,' etc. It is quite true, as Mr. Richardson has urged in defence of the method he adopts, that in many cases it is difficult to know how far the use of provincial words is confined to one tribe, or to one region of the island; and it is equally true that, in many cases, where a word has been at first given as 'Bàra,' for instance, it has subsequently been found to be used by other tribes, as the Tanàla, Southern Sakalava, and others. But we think that, even if in some, or say even in many, cases, a word was thus at first localized too narrowly, it would have been the least of two evils; for the additional range of use might always be added as it became known. As it is, we have only the vague description 'provincial' for all non-Hova words, and we think that thus a good deal of valuable information as to the range of the various dialects, and the possibility of roughly mapping them,—an important work for the complete knowledge of Malagasy in its widest sense—has been lost, so far at least as the Dictionary is concerned. In this respect the new book is less valuable than the French Dictionary, which gives the locality of many provincial words.

The Dictionary is also a little defective, we think, in not giving more fully some of the more common verbal nouns. It would often be a convenience to have these given, with a reference to their root form.

Perhaps the weakest point in Mr. Richardson's work is the frequent want of clearness in the English definitions of Malagasy words; and even the title of the work seems inaccurate, for we have "A New Malagasy-English Dictionary; edited and re-arranged by," etc., etc. It is difficult to see how a *new* thing can be *re*-arranged.

But it would be ungracious to dwell further upon faults and defects when there is so much to praise. We heartily congratulate Mr. Richardson upon such a valuable piece of work as this Dictionary is, and done, on the whole, so thoroughly and so well. All future students of Malagasy will thank him for the labour and research he has expended upon this book. He has smoothed away many difficulties, and has made the acquisition of the language far more easy than it has hitherto been. We hope that he will live to give us a still more complete dictionary even than the one we have here reviewed, one in which the use of the words shall be largely illustrated by native *kabàry*, laws, songs, proverbs, etc., and which shall embody more completely both obsolete and provincial words, together with everything else that can throw light upon the speech of the various tribes inhabiting Madagascar.

JAMES SIBREE, JUN. (ED.)

## NATIVE PRODUCTS USED IN MALAGASY INDUSTRIES.\*

**I**N a large and comparatively unexplored country like Madagascar doubtless many native products exist which, although unknown at present, will, in due course, be absorbed in the industries of civilization. A large field remains open to the explorer and analyst in this direction, whose efforts will probably be well rewarded. Meanwhile a paper indicating some of the applications already made by the natives of the materials ready to their hand may not be thought uninteresting, as illustrating certain phases of their character, and as possibly suggestive from a commercial point of view.

Taking, as a convenient line to follow, the three great Kingdoms of Nature,—Animal, Vegetable, and Mineral—we shall briefly mention the native products made use of by the Malagasy, having reference mainly, however, to the inhabitants of the central provinces.

I. The **BULLOCK** of Madagascar, which is of the Zebu breed, has always been considered by the people as one of the chief glories of their country and a prime element in their national wealth. Large herds of these beautiful animals are grazed on the fertile plains to the north and west of Imérina; they are mostly the property of the wealthy Hova and are tended by colonies of slaves and freedmen. Numbers of bullocks are fattened in pits or *fàhitra*, in most villages in Imérina, for home consumption at the Fandroana or New Year's festival, and they attain immense size and fatness, the hump sometimes weighing sixty or seventy pounds. The export of bullocks to Mauritius and Bourbon has, for many years past, been one of the chief items of commerce with this country, except when interfered with by the aggressive action of foreigners.

Up to a recent date the **SKINS** of bullocks were cut up with the flesh and eaten. Now, however, many thousands of hides are exported yearly, and the conveying them to the coast employs a large number of native carriers, who, on the return journey, bring up the various imported merchandise consisting mainly of calico, prints, salt, iron pots, sheet-tin, crockery, etc., which find a ready sale among the people. The art of tanning and working leather was introduced by Mr. Canham, a missionary artisan in connection with the London Missionary Society, in 1822; and government works have ever since existed for preparing leather and making accoutrements for the soldiers; but comparatively little is done in this direction by the Government at the present time. The chief tannery is at Vòdivato, and the bark of the *lalóna* (*Winmannia Bojeriana*, Tul., and other species of *Winmannia*) is the agent mostly used. Private tanneries, on a small scale, exist in the Capital, in which the bark of peach trees is mainly used; and cured skins of oxen, sheep, and goats are always on sale in the markets, being used by the natives to make boots, shoes, bags, saddles, hat-linings, etc. The **HORNS** of bullocks, which are very long and handsome, are made into spoons, of which great numbers are constantly on sale.



in the markets, as they are universally used by the people. The ordinary spoon is sold at the rate of four or even six for twopence, but some of finer quality fetch threepence or fourpence each. Bowls, forks, and a few other fancy articles are also made in small quantities, mostly for sale to foreigners. Buttons are punched out of BONE, and finished off with knives and the leaves of a tree called *ampaly* (*Ficus soroceoides*, Baker); spindles, forks, and paper-knives are also made, but great quantities of bone are thrown away as useless. False teeth are sometimes made from the shin bone of the ox, and also from sheeps' teeth.

Only very lately has any other use been made of HAIR than that of stuffing or mixing with building plaster; now, however, a few brushes are made with pigs' bristles and bullocks' hair. This is a branch of industry capable of development, as great quantities of bristles are merely burnt or thrown away. LARD and SUET are melted and sent in considerable quantities to the coast for export; but a good deal of fat is used in the manufacture of native soap and candles. The artisans connected with the London Missionary Society introduced the art of soap-making as far back as 1828, when the soap was made reasonably white, but it has greatly deteriorated in appearance, as manufactured by the natives, although its cleansing qualities are good. The lye used in its production is the ashes of the prickly-pear and other shrubs, which are simply mixed without further preparation, thus accounting for the dirty appearance of the finished article. One would think that a chemically prepared alkali which could be sold cheap would find a market among the soap makers, if its proper application could be shown to them. Candles are a very recent industry, created apparently by the increasing number of students and readers, who require a more satisfactory light during the long evenings than is afforded by the primitive contrivance of a burning wick resting in a dish of melted fat. The candles are made in tin moulds, and frequently have a good deal of wax mixed with them; but there is still great room for improvement as to the proper proportions of the wick and its surroundings. The LEGS, SINEWS, BLOOD, and OFFAL of bullocks are all used in the preparation of oil, glue, and nitre, which last is employed in the manufacture of gunpowder by the Government.

POULTRY is very plentiful in Imerina and will probably prove a valuable source of commerce when roads are opened to the east coast; the only use made of the FEATHERS is to stuff a few pillows. The goose quills are not even made into pens.

The art of spinning and weaving SILK is a very ancient one in Madagascar, and some species of silkworm are indigenous. The cocoons of one native species are found in the grass and the silk obtained from these is of a very inferior quality, called *lândinambôa*, literally, 'dog-silk.' The worms producing the best native silk are fed on the *ambèrindry* (*Cajanus indicus*, Spreng), a native shrub much cultivated, especially in the Bêtsiléo province, for this purpose. A very large cocoon, made by a number of worms working in a colony, is found in the forest, and also produces good silk called *lândibè*. This cocoon is from 20 to 30 inches in length and, when cut open, 10 to 20 inches in breadth. The Chinese silkworm, as well as the mulberry tree, were introduced by the early missionaries and are

still carefully cultivated by the people. The spinning of the silk is done entirely by hand with small spindles called *ampèla*, which is also one of the words for a girl, affording an interesting parallel with the origin of our English word 'spinster.' The weaving also is done in hand-loom of the most primitive type, laid horizontally, and involving great fatigue for the women who do the work. Very beautiful fabrics, however, are produced by means of these rude appliances. These mostly take the form of the national upper garment, called the *lamba*, a cloth from two and a half to three yards long by two to two and a half yards wide. Some of these are of plain white silk; others white with raised woven patterns; others again are of various colours, obtained mostly from imported dyes, and, in many cases, having elaborate woven patterns resembling embroidery; they are generally in two widths, with wide borders which are specially gay in colours and pattern. These *lamba* are worn by the non-military chiefs of the people on important public occasions, and by the upper classes of both sexes on special festivals. They are a favourite 'curio' for foreigners on the look-out for something distinctive of Hova manufacturing art. Most of the native silk, however, is used in making the *lamba mène*, or 'red lamba,' the dark, almost maroon, colour of which is produced by a native dye procured from the bark of a tree called *nàto*. Great numbers of these *lamba* are on sale at every market, and the demand is unceasing, inasmuch as universal custom requires their use on two important occasions: the one being at the New Year's festival, the other at every funeral. No coffin is used at the burial of the dead, but the corpse is wrapped in these red silk *lamba*, the number used being dependent on the wealth and rank of the deceased. For people just above the lowest rank, from one to six are used; for wealthier people 20 to 30 are frequently employed; and, in some cases, as many as a 100 have been wrapped round a single corpse. Fresh *lamba* are also used when (according to Hova funeral customs) bodies are removed from temporary graves to the elaborate family tomb, which has been erected at great expense and trouble. Coats and trousers are also made of the undyed native silk, and these, although not very attractive in appearance, are very durable.

WAX and HONEY are gathered in the forest and sold in the markets, and of the former a considerable quantity is exported. Bees are not much cultivated except in a few villages on the borders of the forests.

II. Turning our attention to vegetable productions, we naturally give the first place to the TIMBER which abounds so luxuriantly in the magnificent forests of this country. The most wasteful system of obtaining the timber prevails, and the axe being the only instrument used, a large trunk furnishes only one or two roughly hewn planks, the remainder being left to rot; and large spaces are continually being cleared, either by accidental fires originated by the charcoal burners, or by intentional conflagrations for the purpose of planting rice. Ebony is found on some parts of the coast and exported, and small quantities are brought to the interior and used for ornamental work. The export of timber is illegal, according to Malagasy law, but large quantities are brought to the

markets of the interior and find a ready sale for house-building and cabinet work, in which the native carpenters are fairly proficient. The following are a few of the best known varieties of timber, with the chief uses to which they are put :—*hàzondràno* (a species of *Elæodendron*), a white tough wood used for the poles of gentlemen's palanquins; *hàra-hàra* (*Neobaronia phyllanthoides*, Baker), a hard mottled wood, very like *lignum vitæ*, used for handles for spades; *vðambðana* (*Dalbergia Baroni*, Baker), a wood something like mahogany and taking a fine polish, used largely in cabinet making; *laldna* (various species of *Weinmannia*); *hèlatra* (*Podocarpus madagascariensis*, Baker); *vðlanirana* (*Nuxia capitata*, Baker); *varðngy* (*Ocotea trichophlebia*, Baker, and other trees); *fànsikàhifra* (a species of *Plectronia*); *mðkaràna* (*Macaranga echinocarpa*, Baker, and other species of *Macaranga*); *hitsikitsika* (*Colea Telfaireæ*, Bojer); all of which are much used in house-building.

BAMBOO of various species grows plentifully in the forests, but the uses made of it is by no means comparable to the ingenious applications made of it in India, China, and Japan. It is used largely in house-building, especially in the forest districts; in lengths of a few feet it forms the poles on which the men carry their burdens up and down the country; and in smaller pieces it is used for making musical instruments, snuff-boxes, etc.

The PALMS are very numerous and are largely used in various ways by the natives. In the lower parts of the country they furnish the materials for the frame, floor, sides, and roofing of the houses, and also for string for tying all together. The *rofia* palm (*Sagus ruffia*) is of special interest from an industrial and commercial point of view. From the young and still unopened leaves a straw-coloured fibre is obtained, which is woven into a native cloth of various degrees of fineness, from the stout *sadia-diaka*, or *rabanna*, used for wrapping up burdens on the coast, to the *jàbo* of Imerina, which has almost the appearance of nankeen. *Lamba* made of this fibre, and called *jiafòtsy*, were almost universally worn before the introduction of calico, and large numbers are still made and worn by the poorer classes. Some of these, made in Vònizòngo, are gaily decorated with coloured stripes, and of late years have been extensively imported into England and sold for window curtains and hall hangings. The fibre is in increasing demand for exportation, and is doubtless put to uses not known by the uninitiated; gardeners employ it largely for tying up their plants, and it is amusing to hear these scientific gentlemen confidently affirm that it is a 'grass;' this, however, is a very general error in England, where it goes by the name of 'raphia grass.'

SEDGES and RUSHES abound in the marshes, and are put to good service, especially in the central provinces, at a distance from the forests. The houses are almost universally thatched with *hèrana* (*Cyperus latifolius*, Thouars). The *zòzòro* (*Cyperus aequalis*, Vahl) forms rush doors, windows, partitions, sides of houses, etc. Mats of all sizes and qualities are made from *hàzondràno* (*Scirpus corymbosus*, Heyne), *harèfo* (a species of *Heleocharis*), etc., and are used generally for floor coverings, and in some districts as linings for the insides of houses; and among some tribes in the south these fabrics form the only dress worn by the people, not only as loose coverings, but as well-fitting jackets and other

garments. Baskets of all sizes, called *sobiky* and *hàrona*, are also made in large numbers, and are of great service in carrying and storing things in general. On the east coast a regular industry exists among the Betsimisaraka in making, for exportation to Mauritius, sugar sacks from a marsh plant called *pénja* (probably a species of *Lepironia*). GRASSES and SEDGES too are well employed in making hats and small fancy baskets of various shapes and qualities. The *dhibàno*, *manàkalàhy*, *tsidrò-dròtra* (*Sporobolus indicus*, R. Br.), *làkatra*, and *bànoka* are the chief varieties used. FIBRES from the young shoots of various palms and other plants, and from the bark of various trees, are also used for the same purpose, as also for making ropes and string; the *anivona* (a palm), the *hàfotra* (various species of *Dombeya*), the *tsòntsona* (*Pavonia Bojeri*, Baker), the *tartitra* (*Furcraea gigantea*, Vent.), the pine-apple, the banana, and the *làfa* are pressed into this service. COTTON is grown in small quantities and woven into *lamba*; on the south-east coast it is said to be of a very superior quality, and fetches a good price when exported. A DOWN called *vònim-pànòro*, lit. the flower of the *fanòro* (*Gomphocarpus fruticosus*, R. Br.) is used for stuffing cushions, and it is occasionally made into *lamba*, which are remarkably light and warm. The plant is an annual and grows very readily as a weed; the down in the seed-pod has a beautifully silky appearance and may be worthy the attention of manufacturers. HEMP is grown and used for making strong durable *lamba* much worn by the poorer classes of the people; it might be produced in any quantity. The SUGAR-CANE is cultivated and used for making a coarse kind of native sugar, but mainly for distilling the native rum called *làka*. Sugargrowing will undoubtedly be one of the chief industries of this country when fairly opened to commerce. Native DYES are obtained from the turmeric root (*Curcuma longa*, L.), which is an introduced plant, but has now become quite naturalized under the name *làmolàmo*; from the bark of the *nato*; the *aika*, the common indigo (*Indigofera tinctoria*, L.) and also from a black mud. Many aniline dyes, however, are imported and are in general use. A climbing plant (*Vahea madagascariensis*, Bojer) in the forests yields INDIA-RUBBER called by the natives *singotra*; the tree known by the native name *tàndroròho* (*Trachylobium verrucosum*, Lam.) yields GUM-COPAL, called by the natives *sàndaròsy*, neither of which are used by the natives, except as an article of export. The TOBACCO plant (*Nicotiana glauca*) grows luxuriantly; the dried leaves pounded and mixed with the ashes of certain plants forms the *paràky* which is used by almost every Malagasy, male and female, from the highest to the lowest. The snuff-box is an article of personal adornment in which the people take great pride. They vary in antiquity and quality, from the richly chased gold one inherited by the Sovereign, to the little length of bamboo, bought in the market for an infinitesimal scrap of money and carried by the slave. The dose is shaken into the palm of the hand and jerked under the tongue, where its virtues are extracted with a delight equalling that of Jack Tar chewing the orthodox quid. Of late some enterprising natives have produced cigars to supply the needs of the smoking foreigners, and the Malagasy are fast adopting the imported practice.

III. The mineral resources of Madagascar have still to be discovered and developed. Hitherto the policy of the Government has been adverse to any attempt to open up what will probably prove to be a source of great national wealth.

The GRANITE and GNEISS which abound in the central provinces have only comparatively lately been used for building purposes, and that only in the Capital and its vicinity. The Royal Palace, some of the largest Churches, and some rather imposing looking tombs, have been built of this stone. Only the partially decayed rock is worked and dressed, as it is difficult with the native tools to work it while unsoftened. Large slabs, however, are peeled off the virgin rock by burning cow-dung on the top, and, when the heat has penetrated a few inches, throwing water upon it, when the contraction loosens immense pieces which are used in the construction of their family tombs. Slabs fourteen to eighteen feet long by ten to twelve feet wide, and four to eight inches thick, are frequently used as sides and coverings to these tombs, which are mostly underground, but are surmounted by an elaborate structure of dressed stone, as indicated above. The dragging of these large stones, in a country where no roads exist and no wheeled vehicles are used, is one of the serious affairs of Malagasy life, relieved, however, by the festivities which accompany it. All the members of the tribe, men, women, and children, gather for the occasion, dressed in holiday attire; long ropes of twisted bast or grass are fastened to the stone; three or four long processions hold the ropes; a man with a fluent tongue mounts the stone to animate the people with his antics and jokes and declamation; singers clap their hands and chant; and the big mass is jerked on inch by inch, day after day, so long as the people can spare the time, although it often takes two or three dry seasons to accomplish the task. Granite and gneiss of various tints in grey and pink abound; and when the art of polishing stone is introduced, it is possible that the production of ornamental and monumental granite may become an industry of the central province, especially as emery stone is found at no great distance. The ordinary houses in Imerina and Betsileo have always been made of the clayey soil, kneaded into large lumps and built in courses of about eighteen inches in height. The brick mould, however, is more and more generally used, and in the majority of instances the bricks are simply the puddled soil without any mixture of straw or grass, turned out from the mould to dry and harden in the sun. BURNT BRICKS and TILES are becoming more common, the fuel used in burning them being peat, called by the natives *fômpotra*.

The potter's art has not got beyond the very earliest stage in Madagascar. Round water-pots of all sizes, and stands to serve as rice pots, are moulded by hand and burnt; and this is about the extent of the native pottery at present. EARTHS of various colours are abundant, and are sometimes used for decorating the walls of houses. A white earth called *tàny ràvo* is in greatest request for this purpose; it is a kind of kaolin, and will probably be found to have some commercial value for the production of fine china. PLUMBAGO or GRAPHITE is found plentifully in Imerina and is used for blackening the clay pots and stands mentioned

above. The small quantity used is easily obtained by scratching a few inches below the surface, but no attempts have been made to discover more solid veins of this mineral, for which indeed no present demand exists. The native name is *mānjarāno*.

All the LIME used in Imerina is obtained from the travertine deposited by the hot springs at Sirabé in North Betsiléo, four or five days' journey from the Capital, whence it is brought on government service by the inhabitants of the district. It is consequently difficult to get, very expensive and very impure, and but sparingly used even in building; the ordinary mortar being nothing but puddled clay. An outcrop of crystalline limestone occurs about ten miles south of the Capital, which will probably some day be utilised for obtaining lime, although the distance of fuel will be a serious obstacle. Near Sirabe also are extensive deposits of SULPHUR, where it occurs in nodules of various shape in combination with earthy matter. These are dug under the superintendence of government officers and carried to the Capital by the inhabitants of the district, thence sent another day's journey to Ambóhidratrimo, a village on the edge of the forest, where there are rude furnaces for separating it. It is thence returned to the government works in the Capital and purified sufficiently for use in the manufacture of gunpowder. Similar deposits occur about a day's journey west of the Capital, where also LIGNITE was recently found, and awakened the hope that coal had been discovered. No use, however, has yet been made of the lignite. LEAD is brought from the Betsileo province and is used for casting bullets, the exigencies of the war with the French having produced this relaxation of the stringent laws against working metals. No appliances exist for the separation of any silver that may be in the ore, nor indeed has any analysis been made of the metal.

The only native metal used by the Malagasy is IRON. ✕ Of this most useful of all metals great quantities exist in many parts of Imerina. It is specially plentiful on the west of the forest bounding Imerina on the east, in the district called Amóronkay. The ore is smelted by being burnt with charcoal in pits covered with clay, the fire being maintained by a blast from pistons worked by hand in pieces of hollow trunks. The account given in Ellis's *History of Madagascar* (vol. I. p. 306) of the smelting of iron is equally correct of the present day, as no improvements have been made. Numbers of useful iron articles are manufactured and sold in the markets, and great quantities are taken to the various tribes, in all parts of the country, for sale. The chief articles in demand are spade blades, which are eighteen to twenty-four inches long by about four to six inches wide, spear heads, axes, spoons, and knives. Besides these, rough tools for carpenters, and still rougher imitations of cutlery, are exposed for sale in the markets. All iron work is done by the hammer and anvil, and some of the native smiths are very clever, and have recently succeeded in turning out some guns and mitrailleuses. A large field for the expansion of the iron industry will be opened when the art of casting is fairly introduced and established, as may be gathered from the large number of iron pots which are annually imported.

This rapid and by no means exhaustive survey of the native products of this island, as supplying the industries of the people, affords, we think, conclusive evidence that the Malagasy are capable of advancement in the arts of civilization, and that, if fair play be given to them, they may be expected to contribute their quota to the commerce and material advancement of the world.

A couple of incidents illustrative of their ingenuity and patience in the use of such appliances as are at hand may conclude this paper, and show that they have some, at least, of the qualities which help to produce national prosperity.

In a country district our host had a box of Bryant and May's 'Tiger' lucifer matches, which seemed rather an unusually expensive luxury at such a distance from the Capital. But the explanation fully exonerated our friend from the suspicion of extravagance. He divided the detonating end of a match into three or four pieces, with each of which he could fire off his fowling-piece and so save percussion caps. In the Capital some pounds of fine white flour from native-grown wheat was brought for sale. When the owner was asked how he ground the wheat and sifted the flour, the reply was, that it was ground in a small coffee mill and sifted through a piece of fine muslin.

J. WILLS.

In the course of this paper I have occasionally referred to the beneficent influence of the artisan members of the London Missionary Society in introducing the useful arts into this country between 1818 and 1835. I append in this note a summary of the results of their work as given by the late venerable James Cameron, himself the last survivor of that useful band of men, who read it at a social meeting of missionaries in Antananarivo, Oct. 20th, 1874. He instances ten points of success:—

- "1. They greatly extended and improved the manufacture of iron-work in the country, applying it to the construction of machinery and to many of the uses to which it is now applied in Madagascar.
- "2. They were successful in discovering the best materials for the manufacture of leather and applying them to the tanning of hides, and dressing the same so as to be used in the manufacture of shoes, boots, and general leather-work, all of which have been carried on by the natives till the present time.
- "3. In building they improved many kinds of wood-work, and introduced stone-work for various purposes, made bricks of various kinds for building purposes, and Mr. Freeman brought slates and grindstones from Betsileo, which were unknown here before.
- "4. They discovered limestone in the country after years had been spent in a fruitless search for it.
- "5. They introduced cotton machinery and cotton spinning which, though not economically adapted to the civilization then existing in the country, continued to be used till the machines were worn out.
- "6. The same may be said of weaving; it was fairly tried, but it did not pay.
- "7. They discovered plants which yielded a large supply of potash and soda, which they used in the manufacture of soap on a considerable scale, and of glass and pottery-ware to a small extent. The former was at first monopolized by the Government, afterwards made by the people, but greatly deteriorated.

- "8. They also discovered what had long been sought for in vain by the Government and others,—a metallic sulphuret or other mineral from which sulphur could be extracted in abundance.
- "9. They directed the manufacture, mostly on a small scale, of various salts, chiefly sulphates, carbonates, and nitrates, used in various arts and in medicine, and carried on by the Government till the present time.
- "10. They constructed water-mills for the Government, with a large reservoir, and brought water from a distance of some miles."

It must be acknowledged, in the face of this statement, that the improvement of the Malagasy *materially* has by no means kept even pace with the rapid strides they have taken intellectually and morally during the past 30 years. This is not the occasion for discussing the causes of this disproportionate advance. We leave the subject with the expression of the fervent hope that the political atmosphere may be speedily cleared, and that along with a well-founded assurance of the integrity of their country, the Government may be able to put aside all undue jealousy of foreigners, and at the same time relieve their people from the repressive influence of *fánompiana* (unpaid government service), and so lead their country into the opening paths of industrial and commercial progress, failing to enter which a people can never become a nation fitted to hold its own among the civilized communities of the present day.—J.W.

## THE SWAHILI ELEMENT IN THE NEW MALAGASY-ENGLISH DICTIONARY. X

WHAT is aimed at in the present article I will state here at the outset, that the reader may know beforehand what he is to expect. It is (1) to give the briefest possible information about the 'what' and the 'where' of the Swahili language, as nobody can be expected to take much interest in a comparison of languages in regard to which he has not some general idea, at least as far as these two points are concerned. (2) To review briefly what has already been done as to comparing the two languages in question, i.e. Swahili and Malagasy. (3) To make some critical and explanatory remarks on the alleged Swahili words in the new Malagasy Dictionary, and to give a few additional ones which I have noticed. (4) To summarize the chief facts of the subject and point out the conclusions to be drawn from them.

After these preliminary remarks, I will at once proceed to treat of each of these sections in the order as given above.

I.—The Swahili, Suahili, or Kisuahili seems to be, to a very great extent, a mixed language. The great bulk of its vocabulary is African and common, it seems, to different tribes along the East African coast. The next component is Arabic, as merchants from Arabia and Egypt have been trading on this coast for centuries. Some few words have



also entered into it from other sources, as Persian (through Arabic), Malabar dialects (through Hindu traders), Spanish and Portuguese (as the word *bandera*, of which more later on), and even some English or French words (as *jasmini*=Eng. *jasmine*\*). But, so far as I can judge from a rather hasty estimate, the whole of the foreign element would not amount to more than, say, one-tenth of its vocabulary. As to the rest of its words, and especially as to its grammar, it is certainly a Bantu language, belonging to the north-eastern branch of that great family of speech. It must, however, be admitted that even in its grammar "the decay of the original grammatical structure is greater than in most of the Bantu languages. And the foreign element has also to some extent entered into its grammar, or at least into such parts of speech the words of which are usually enumerated in grammars as numerals, conjunctions, etc."† For besides the original native numerals, the Swahili has also got the Arabic ones; amongst its particles we find such purely Arabic words as the conjunction *laken* (but), and the preposition *hatta* (until); and even the comparison of an adjective is generally effected by means of the Arabic words *saidi* (more than) and *kulla* (=Arabic *kull*, Heb. *kol*‡); and the demonstrative pronouns *hi*, *huu*, and *huyo* (this, that) are evidently identical with the Arabic *hia*, *hua* (personal pronouns with demonstrative power). This shows that foreign elements, in certain respects, have influenced this language more than ever the Norman-French did the English, although the introduced words are so much fewer than are the Norman-French words in English.

Swahili is chiefly spoken in the central portions of the East African coast. Its head-quarters seem to be at Mombasa, where, according to Dr. Krapf, it is most pure and elegant; but it is spoken (or at least understood), with some slight dialectic variations, on the whole coast, from Mozambique in the south to Mugdasha (Magadoxo) in the north. And although it is chiefly the language of tribes living on the low plains along the coast, as its name also suggests,§ it seems to be known far inland and to be the common medium of communication for traders even along the shores of the great lakes in the interior; while at the same time it extends its influence to the east as far as the Comoro Islands, on three of which (Comoro, Mohilla, and Johanna) Swahili is the ordinary language. As to its mixed character and wide-spread influence, especially as a medium of inter-tribal trade and business, it seems to hold about the same position in East Africa as the '*Lingua franca*' once held in the Levant, and Hindustani still, to some extent, holds in India.

The conditions necessary for the origin of such languages are, of course, that the natives come into close contact with such foreigners whom it is to their own interest to understand and to be understood by.

\* Occurs, however, also in Arabic (*yasmin*). [Surely, however, the English and French words come from the Arabic or Persian?—EDS.]

† See Dr. Bleek's *Comparative Grammar of South African Languages*; §§ 482, 483.

‡ Curiously enough, the Arabic origin of this word does not seem to have been noticed at all by Dr. Krapf.

§ Swahili or Suahili is an Arabic word, meaning plain level ground (*sahala*, to be level; *sahil*, plain; *sahl*, a plain).

This is chiefly the case with the trader and the conqueror, each in his own way. It is generally quite different with the missionary. Here the interest is, at least at the beginning, one-sided; for it is of the greatest possible consequence to the missionary to be understood, while the natives, on the other hand, do not see that it matters to them whether they understand him or not.\* Therefore he is obliged to try to acquire such a knowledge of the language as to enable him to speak and write it with exactness, while he will not introduce more foreign words than are absolutely necessary.

II.—It is quite natural that a language like the Swaheli should have some influence on the language of the great island to the east of its proper domain; for although the Swaheli-speaking people seem never to have had any connection with Madagascar, the Arabs, who have traded here for centuries, have generally come from the Swaheli coast, and very seldom direct from Arabia; the majority of them have probably been born in the Swaheli-speaking districts, so that they are a kind of 'Arab creole.' Here in the Capital I have often met with so-called Arabs who could write with Arabic characters and read Arabic books I put into their hands, but were unable to translate what they had read without my help, as their language was confessedly Swaheli. Such people, chiefly traders, have of course introduced Swaheli terms in connection with their trade; and even when introducing Arabic words (i.e. Arabic words already naturalized into Swaheli), they have done so unconsciously and have given them the form such words had already acquired in Swaheli.

Being partly aware of this, I felt it a great drawback, when writing my article on Arabic words in Malagasy, that I had so little knowledge of Swaheli. I easily saw that such a knowledge might have both helped me to detect the Arabic words in Malagasy, and have been a key to the explanation of the changes they had undergone on their way hither through East Africa.†

But at that time very little had been published about Swaheli (small vocabularies, etc.), and even that little was inaccessible to me. What little I knew was gleaned from passing remarks in general philological works, and the *Travels* of Dr. Krapf, who also gave me some oral information about it when I called on him at his residence in Kornthal, in Germany, in 1869, some months before I left for Madagascar. Dr. Steere's *Handbook of the Suahili Language* had just been published when I wrote, but was not accessible to me. The Rev. W. E. Cousins, who went home to England through Zanzibar, seems to have been the first Madagascar missionary who had access to Dr. Steere's *Handbook*; and he immediately gave us the benefit of his knowledge in the shape of a comparison between Swaheli and Malagasy words in the next ANNUAL (No. II. pp. 20-22). But as his time for inspecting the book was, of course, very limited, he could only give us a smattering of the subject, comparing about 50 words in the two languages. Some of these, however, are very

\* I need not say that, in reality, the interest is here one-sided in the opposite direction. The trader works for himself, the missionary for the natives; but this they cannot see at the outset.

† See ANNUAL No. II., pp. 76, 77.

doubtful, and as regards one of them, there seems to be some mistake (*nyati*, buffalo, is compared with Malag. *astra* (?), probably a printer's error);\* but most of them I think hold good.

No further step towards utilizing the now available knowledge of Swahili for the illustration of Malagasy was made until Mr. Richardson began to compile his new Malagasy Dictionary, when Mr. Pickersgill undertook to compare the Malagasy vocabulary throughout with that of Swahili for the benefit of the said work, a contribution for which we are all very thankful.† But every first attempt of this kind must necessarily have its imperfections in spite of all care and diligence. It is, besides, to some extent, simply a consequence of the peculiar nature of such a subject that many suggested identifications can only be *guesses*, of more or less probability, and in many instances Mr. Pickersgill has marked them as such by a query. Therefore when I proceed to criticise some of his identifications, I wish it to be clearly understood that I am as far as possible from depreciating the good work he has done.

III.—Let us now examine the Swahili words in Malagasy as given in the new Dictionary. As I have not had time, and scarcely patience enough, to hunt them out, I directed an intelligent native to write out for me all words marked "Swa." The number he found out for me in this way amounted to 227. In turning over the leaves of the new Dictionary, I have detected several words which he has overlooked; and, as there may still be some I have not noticed, the total number cannot be far short of 250. Many of these, however, are very doubtful; others are no more Swahili than they are Malagasy, being in both languages introduced foreign words, especially Arabic, although they may have come into Malagasy through Swahili. In some few cases the alleged Swahili word is found in Malagasy, but the identification is wrong; e.g. Swa. *ngara* (transparent) is given under the Malag. *ngdra* (being of a mixed colour), while it is evidently to be identified with the Malag. *mangàrangdrana* (transparent); cf. also *zàha*. Some of the alleged Swahili words I have not been able to find at all in Dr. Krapf's Dictionary; I will give a list of these later on.

Finally, there are many instances in which a word apparently common to Malagasy and Swahili is also found in several other African languages, in which case the question arises whether such roots have been introduced into Malagasy through Swahili, or whether they belong to the original African element in Malagasy. In most cases, however, this can be decided by the *locality* where the word in question is in use. Nearly all Swahili words in Malagasy are 'provincial' (and duly marked as such in the Dictionary) and mostly have a very limited range (generally confined to some of the coast districts). Besides which, the introduced Swahili words have of course, as a rule, been brought to Madagascar by traders from East Africa, and therefore generally prove to be *terms of trade*, or names of articles introduced by trade from the Swahili coast. Therefore I would make bold to lay down the rule that, *Wherever a Malagasy word of common occurrence and referring to objects of common life is found, not only in*

\* This was so; it should have been *oàtra*; see the new Dictionary, under this word.—EDS.

† I understand that Mr. Sibree had also some share in this work.

*Swaheli, but also in other African languages, it is almost certain that it has not been introduced into Malagasy through Swaheli, but belongs to the original African element in Malagasy.* The Malagasy word *òmbý* (cattle, Swa. *ngombe*) is a good illustration of what I mean. (See my remarks on this word later on.)

Turning now to the several words given as Swaheli in the new Dictionary, I shall pass over in silence all those with regard to which I have no new information to give, or the identifications of which I have no special reason to demur to. After having in this manner gone through the Dictionary and its Appendix, I shall mention a few other Swaheli words I have noted which seem to have been overlooked by Mr. Pickersgill.

**A. ALLEGED SWAHILI WORDS IN THE NEW DICTIONARY.**

1. *Akànga*: the guinea-fowl; Swa. *kanga*. Probably a true African word, as this bird is of African origin, and the word occurs in several African dialects, with some slight variations as to its form: Nyamwezi, *hanga*; Sena and Maravi, *kanga*; Makua, *ikaka*.

2. *Akàñjo*: coat, dress; Swa. *kanzu*; Fr. *canezou*. As the Swa. word means very much what the first kind of coat here must be supposed to have been (a long shirt-like garment), especially if introduced by East African traders; and as the word *canezou*,—which can scarcely be called French—is not likely to have been the word the French would have used if they introduced dresses here, I think we can take it for granted that the Swa. *kanzu* is the origin of our Malag. *akanjo*. Besides, there can scarcely be any doubt, according to tradition, that the Malagasy chiefs obtained a kind of dress from East Africa before they had any trade of importance with Europeans. The Swaheli word seems to be of Arabic origin. *Kasu*, *kiswa*, and *kaswa* all mean 'vestment' in Arabic, and are all derived from the verb *kasa*, to clothe. The prefixed *a* in *akanjo* is no doubt only a remnant of the Arabic article *al*.

3. *Akòhò*: the domestic fowl; Swa. *kuku*. This is certainly a true African word, occurring in different forms in the various dialects. Nyamwezi, *ngòhò*; Yao, *ngukù*; Makua, *ilaku*;

Maravi, Tette, Sena, *kuku*; Sofala, *huku*; Zulu, *inkuhu*; Inhambane, *koku*; Cape Delgado, *uku*. The original form has most likely been *ku* or *kuk*, which is, after all, perhaps the same word as the Eng. *cock* and Fr. *coq*. Onomatopœetic words like this often originate at the same time in different countries.

4. *Akòndro*: the banana tree and fruit. This is compared with Swa. *mkungu*, but, according to Dr. Krapf's description of it, this must be a different plant altogether. Besides, the form of the two words almost precludes the existence of any relationship whatever. The banana tree is in Swa. called *ndizi*, which is perhaps only a corruption of the Ar. *muze*, bananas, from which we have the generic term *Musa* in botany. In Yao, in which the banana tree is called *ligombo*, the fruit stem is called *mkonga*, a word that comes very near the Swa. *mkungu*, and is most likely the same word; for while *mkungu* alone, according to Dr. Krapf, seems to be quite a different tree, he gives *mkungu wa ndizi* as "the stalk on which the banana fruits hang." In other East African dialects quite different words are used for bananas; e.g. *inika*, *inaka*, *madoke*, *ligombo*, *ukova* (Zulu), the last of which comes nearest to *akondro*. The comparison with words of the Malay-an class, as given in the Dictionary, affords no solution. As the initial *a* points to the Arabic article, I am somewhat inclined to refer the word to the Ar. *hodra*, anything green (*akondro*

=*al-kodra*, the green ?), on account of its green stem and long light-green leaves.

5. *Ambóa* : dog ; Swa. *mboa*. Here again we seem to have a word belonging to the original African element in Malagasy : Sofala, *imbua*, and so also in Tette and Inhambane ; Yao and Nyamw., *'mbua*.

6. *Ampaingo* (= *ampàrapain-go*) : fetters, chains ; Swa. *pingu*. This reference seems to be correct. The prefixed syllable *am* appears to be the Ar. article *al* ; but I know no Ar. word *pingu* (*p* does not exist in Arabic) in this sense.

7. *Ampéndra* : a mule ; Swa. *punda*, an ass. Here is the same difficulty with regard to the article ; but I think the solution is that the Swahili-Arab traders who introduced the word here have added the Arabic article to the African name.

8. *Angamia* : a camel ; Swa. *ngamia*. This is no doubt a corruption of the Ar. *al-gamil*, a camel.

9. *Angàrabí* : the name of a star, may be referable to Swa. *ngara*, glitter ; but it is not very likely that it is so, as this root is otherwise not used without reduplication in Malag. (*mangàrangàrana*, clear, transparent). As *Kereb* and *Akareb* occur as names of stars in Arabic (e.g. *Tau Pegasi* and *Beta Scorpionis*), it seems quite as probable that this may be the origin of the Malag. word, especially as the other astronomical terms in Malagasy are Arabic (as with the names of the constellations in the Zodiac and the moon stations, as pointed out by me in ANNUAL No. II., pp. 78-82 ; No. III., p. 131).

10. *Antréndry* : dates, is probably the Swa. *tende*, with the Ar. article ; but the form is rather obscure. In Arabic dates are called *temra* and the date-palm *nahla*. In Nyamw. dates are called *nende*.

11. *Arahába* and *màrahàba* : salutation, are pure Arabic words (see ANNUAL No. II., p. 83, where the full form is given) which Swahili, like Malagasy, has borrowed. In the Dictionary a reference is given to the

Arabic under *arahaba*, but not under *marahaba*.

12. *Asàly* : a shawl ; Swa. *shali*, is now a cosmopolitan word, found in both hemispheres, from Eastern India in the east to California in the west. It is thought to be originally a Persian word. In Madagascar it seems to have been introduced direct from Arabia, as it appears in the Ar. *as-shalu* (with the article), rather than in the Swahili form of the word.

13. *Bàba* : inter. beautiful ! capital ! famous ! "[Swa. *beba*, root of verb with the same meaning.] What this parenthesis is intended to mean I am unable to say, as I find no other *beba* in Swahili than the one forming the root of the verb meaning "to carry a child on the back in a cloth," which is no object of surprise calling for an explanation, at least not in this country. (The Swa. *beba* should have been given under Malag. *bàby*. See my additional words.)

14. *Bahàry* : the sea ; Swa. *bahari*, is of course the Ar. *bahr* (lake, sea), so familiar to every one in maps of the Holy Land, etc.

15. *Bandàry* : a harbour, a landing-place ; Swa. *dandari*. This is a Persian word, meaning a place where merchandise is stored and kept until sold, an emporium. The word early passed into Arabic and from thence both into Malagasy and Swahili.

16. *Bàra* : "a tribe... in South-central Madagascar ; Swa. *barra*, a tract of country." This Swahili word is a purely Arabic one, meaning land, country ; but there is not, in my opinion, the slightest probability that it has anything to do with the Malagasy name *Bara*, which certainly primarily and chiefly designates the *tribe*, and *not* the country. Why call a tribe 'country' ? And if the Malagasy had a mind to use such a misnomer, how was it that they chose a word for 'country' which appears nowhere else in Malagasy ? It is certainly much more likely that this tribal name is to be explained by the root *bàra*, which we meet with reduplicated in *bàrabàra*, in the sense

of the *rough-speaking* (people). It is quite natural that the Hova, who had difficulty in understanding their dialect (as they still have), should in a derisive manner designate them by this onomatopœetic word, which reminds us at once of our own 'barbarous,' and the Greek *barbaros*, which seems to have had a similar origin.\* (See also Ar. *barbar*, to mutter.) I cannot leave this word without making the remark that I do not see why a Dictionary, which does not profess to give proper names, should, in some few instances, single out such a name, when a piece of etymology is thought to be involved in it. This remark also applies to *Bály* and, I believe, a few others.

17. *Baraka*: honour, fame, is thought to be connected with the Swa. *baraka*, blessing, and *barakba*, the mask-like veil used by Mohammedan women. Both these words are Arabic, or, rather, common Semitic, at least the first of them, which, however, in my view, is quite out of the question here, because the sense is too dissimilar. *Barakba*, which in Arabic has the form *barâkiu*, and means a veil, agrees exceedingly well with the fact that the Malag. *baraka* is only used in combination with *âla* and *âfaka* (taking off, freed from); and it is easy enough to see how the taking off forcibly the veil of a woman might become a phrase for 'putting to shame' in general. It is, however, not likely that the word has been imported here through Swaheli (but rather direct from Arabia, at an earlier period (?), as the accent is so different from that of the Swaheli form, but agrees with the Arabic. There is, however, another Arabic word, *baraq*, meaning splendour, which may equally well be the origin of the Malag. *baraka*.

18. *Dada*: medicine; Swa. *dawa*, is the Ar. *dawao* (medicine), which word seems to be radically identical with the Malag. *báy* (medicine and charm); see my article in ANNUAL No. II., p. 80.

19. *Fady*, prov. *fály*: what must be abstained from, anything tabooed, has scarcely anything to do with Swa. *fali* (an omen), which is the Ar. *fâl* or *falû* (an omen, especially a good one). The taboo idea is too much a Polynesian one to allow us to look towards Africa for the origin of its Malagasy name. But I have not the means of investigating further into the origin of this word.

20. *Fajiry*: a large star or planet. "Probably from Swa. *alfajiri*, the dawn." This Swaheli word should rather have been written *alfágiri*, as the *g* is in this word hard, as in the Egyptian dialect of Arabic, while soft in the Syrian branch of that language. It is the Arabic *al-fajir*, which means dawn, but is also the name of the morning star (Venus). Its form in Malagasy (*j*, not *g*, and without the article) seems to prove that it has not been introduced through Swaheli.

21. *Garâma* and *karâma*: wages; Swa. *gharama*, expense, are the Ar. *gharam* (*gharamatun*)=what one is obliged to pay (from *gharima*, to be bound to pay).

21. *Hôho*: nails of the hands and feet; Swa. *ukucha*. As we have the Malay *kuku*, of the same meaning, there is no need to refer to any other source, especially as *kuku* is the very form the Malag. *hoho* would have in Malay. (Cf. Malag. *aho*=Mal. *aku*; Malag. *holatra*=Mal. *kulat*, etc.)

23. *Ibibé*: grandmother; Swa. *biby*, seems to be only the feminine of *âbabé* (grandfather), also *bâbabè*. Both words are to be referred to the true African word *baba* (see my additional words), which may be radically connected with *âba*.

24. *Ino*, root of *mino*: to believe; Swa. *amina*. The Swa. *amina* is an Arabic verb corresponding to the Heb. *amen*, *heemin*, to believe; but if the Malag. *mino* is the same word, the root cannot be *ino*; if therefore *ino* is taken as the root, it is so taken through a misunderstanding in the

\* See Max Müller's *Lectures on the Science of Language*; vol i., pp. 130-132.

language itself, treating this word according to the general analogy of verbs in *mi*. (Cf. *máty* and my remarks on it in ANNUAL No. II., p. 90; *fáty* is treated as a root, which it scarcely is.)

25. *Jàka*: "meat or money presented by friends to one another on the annual festival of the *Fandróana*; a new year's gift. Comp. Swa. *zaka*, tithes." I have long busied myself about this word and hope now to have made it out at last. It must be the Ar. *zākā*, alms (lit. purifications; cf. Heb. *zaka*, to be pure). This word and *sadaka* are one pair. The first of them denotes the legal, obligatory, the second the free-will, gifts to God (offerings), or to the poor, as His representatives (alms). A good Muslim is expected to spend about one-fortieth of his property in alms, and especially to be liberal at the end of Ramadan (the fasting month) at the festival called Beiram, of which I consider the *Fandroana* to be an imitation. Hence the *jaka* (*zaka*) at the *Fandroana*. What was once the *alms* has now become general.

26. *Jamà*: a national assembly; Swa. *jamaa*. This is the Ar. *jama'atun* or, as pronounced in modern Arabic, *jamāe* or *jamà*, and the very same word we have in Zomà, Friday (day of congregation, from *jama*, to congregate).

27. *Jiny*: the ashes of a deceased prince; Swa. *jinni* (not *jini*, as in the Dictionary). The Swa. *jinni*, evil spirits, is no doubt the Ar. *jinn* or *junn*, the *genii* or intermediate beings between men and angels. These were, however, generally considered as *evil* spirits, and this makes me doubt its identity with the Malagasy word. People were not likely to say that their deceased king had become an *evil* spirit; neither do the Mohammedans believe that their princes become *jinn* after death.

28. *Joháry*: a chief, a president, etc.; Swa. *johari*, a jewel. The word is rather to be referred to the Ar. root *johara*, to be conspicuous, manifest, public.

29. *Kálafáty*: caulking; Swa. *kalafati*, is the Ar. *kalafat* or *gila-fât*, Spanish, *calafatear*, to caulk, from which language the word seems to have passed into nearly all European tongues, more or less altered (most so in Engl. *caulk*); but it is impossible to decide whether it was originally a Spanish or an Arabic word. The fact that in Spanish it has got several derivatives (*calafate*, *calafateador*, *calafateadura*, *calafateria*, *calafatin*) seems to point to a Spanish origin, but, on the other hand, it has no possible etymology in Spanish, while it does not seem impossible to find this in Arabic.

30. *Kárafy* or *kàrafy*: cloves; Swa. *garofuu* (*garafuu* in the Dictionary is a misprint), seems to be the Fr. *caryophylle*, as cloves were introduced into Zanzibar from Mauritius (according to Krapf), and therefore most likely retained the French name. In Arabic cloves are called *goronfol*, probably from the same source.

31. *Karàna* or *karàny*: a Mohammedan Indian trader; Swa. *karani*, a clerk, secretary; another Arabic word in Swahili, viz. *qaran*, the reader, especially the reader of the Qoran (which originally means 'what is to be read'). Cf. *migra*, scriptures, lit. reading, in post-Biblical Hebrew.

32. *Karibo*, adj. and verb imper.: near, come near, come in; Swa. *karib*. The Swa. *karib* is the Ar. *qarib* (=Heb. *qarab*), to draw near. It is in Swahili used exactly as in Malagasy in answer to *hodi* (the Malag. *haody*), when knocking is heard at a door.

33. *Kibàha*: a rice-measure; Swa. *kibaha*, a measure, is the Ar. *qibah*, a measure; cf. Heb. *qab*, root meaning anything hollow.

34. *Kibàna*: "a bedstead, a raised platform for sleeping on out of doors in hot weather, the latter is sometimes provided with a light roof; Swa. *kibanda*, a hut." This seems to be the Ar. *qabban*, *qibban*, *qubban*, a tent, a pavilion.

35. *Kiléma*: a blemish, deformity, scar; Swa. *kilema*, a deformed person. This is the Ar. *kilam*, wounded, deformed, from *kalama*, to wound. The Heb. *kalama*, from which *kelimma*, blemish, shame, is derived, is the same word.

36. *Kiraro*: shoes; Swa. *kiatu*; scarcely a happy identification.

37. *Kiróbo*: a shilling. The Ar. *roba*, from which both *kirobo* and the Swa. *robo* come, does not mean 'four,' but the 'fourth part' (i.e. of a 'dollar'). See my article in ANNUAL No. II. p. 85.

38. *Kóhaka*: coughing; Swa. *ukuku* (in Dictionary given as *uko-ko*), which is probably the Ar. *kakk*, to cough; in ancient Arabic also, to snort.

39. *Lakiny*: but, however; Swa. *lakini*; this is most certainly the Ar. *lakin*, *lakinna*=Heb. *laken*.

40. *Mānanasy*: pine-apple, is certainly the Swa. *mananazi*, of the same meaning; but as to its origin, the word is from Peru (Peruv. *nanas*, pine-apple).

41. *Marába*: fence, enclosure, square; Swa. *mrabba*, which is the Ar. *morabba*, square.

42. *Máso*: eye, should not have been compared with Swa. *macho* at all, as it is only misleading. As the word for eye, of the same root, occurs in the forms *mata*, *matan*, *moto*, etc., in any number of Malayo-Polynesian dialects, there can be no doubt as to the origin of the Malag. *maso*. And when *macho* is reduced to its singular *jicho*, all similarity with *maso* disappears at once. *Jicho* is a genuine African word, occurring in many varieties:—Tette, *zizo*; Sofala, *dsiso*; Sena, *diso*; Cape Delgado, *riso*; Zulu, *iliso*; Quillimane, *lito*. (Mark the easy transition here from *l* to *d* and *r*, as in Malagasy.)\*

43. *Masta*: a boat; Swa. *mashua*, is the Ar. *mashīwa*, a lighter.

44. *Mohôgo*: manioc; Swa. *mu-hogo*, is, I think, only a corruption of *manihoc*.

45. *Mosimy*: northerly wind; Swa. *musimi*, is the Ar. *mausem*, of which *mosimy*, *musimi*, and *monsoon* are all corruptions.

46. *Moto*: tinder, and *motro*, fire; Swa. *moto*, fire. Here we seem to have a genuine African word occurring in many East African languages of the Bantu family: Sofala, Tette, Quillimane, *moto*, fire. It must, however, be kept in mind that here it occurs only on the coast; in the interior the Malayan *âfo* (*afu*, *api*, *hapi*, *pepe*, *yap*, *yaf*, *aif*, *aow*, etc.) is the only word in use. When the Malayan invaders came, they probably took possession of the *ômbi*, *ambda*, and *akôho* (cattle, dogs, and fowls) of the African aborigines, and the names with the *things*; but the fire was not to be taken captive in this way, and therefore it kept its Malayan name, leaving the African name to the African aborigines, whom they drove towards the coasts, where the word is still in use.

47. *Nahôda*: a chieftain, a captain of a vessel; Swa. *nahoda*, *nahozza*, and *nakhoda*, is probably from the Ar. *nakiza* or *nuvakiza*, the captain of a ship.

48. *Ngàra*: "being of a mixed colour. Used only of the eyes. Comp. Swa. *ngara*, root of verb to be transparent." The Swa. *ngara* has nothing to do with this word, but is evidently the root of the Malag. *mangarangàrana*, shining, transparent.

49. *Nia*: root of *minia*, to intend; Swa. *nia*, intention, is the Ar. *niya*, intention.

50. *Omby*: cattle; Swa. *ngombe*. A genuine African word: Sofala, Tette, Sena, *ngombe*; Inhambane, *ombe* and *nombe*; Quillimane, *ngombe* and *nompe*; Maravi, *nombe* and *muombe*; Makua, *ingo*; Nyamw. and Yao, *ng'ombe*; etc. In Malayo-Polynesian quite different words are used in those languages which have any word at all for cattle.

\* I do not, however, mean to deny the possibility of a foreign word being introduced here in its plural form (cf. *Vazaha*), but I think it unnecessary to have recourse to this expedient when we have another and more natural explanation at hand.



51. *Ostirontány*: customs duties; Swa. *ashur*. This *ashur* is the Ar. *ashuru*, the tenth part, then tithes, duties paid in kind at the rate of 10 per cent. Cf. Heb. *asar*, *eser* (ten), with the derivatives *isaron*, *asor*, *maaser*, which are the same word.

52. *Ota*: sin, has scarcely anything to do with Swa. *kossa*, error (Yao, *makosa*).

53. *Pako*: plaster; Swa. *paka*, root of the verb meaning to smear on. It may be the Ar. *baqa*, to stain.

54. *Papango*: a kite; Swa, *kipanga*, a large bird-of-prey. The word seems to belong to the original African element in Malagasy: Sena, *tsapanga*, a small falcon; Yao, *chim-banga*, a hawk. Probably the word originally meant any bird-of-prey. The root seems to be *panga*, which in Zulu means to run at, seize violently, ravage, plunder.

55. *Parasy*: a flea, is certainly the Heb. *parosh*, Ar. *burush* or *burgush*, and not the Swa. *papasi*, ticks, as suggested in the Dictionary. It is strange that the Malagasy form comes nearer the Hebrew than the Arabic. It should, however, be kept in mind that the Ar. *g* or *gh* is only a modification in sound of the Heb. *ayin*, and that *p*, *b*, and *f* are easily interchangeable.

56. *Rady*: consent; Swa. *urathi*, is the Ar. *rudwa*, consent (root, *radi*, to consent). When Dr. Krapf gives the Ar. *adar* as root, it must be either a mistake on his part or a printer's error.

57. *Rafiky*: a friend; Swa. *rafiki*, is the Ar. *rafik*, a friend, or, rather, a companion, from *rafaka*, to keep company with, associate with.

58. *Ramadány*: the Mohammedan fasting month; Swa. *Ramathani*, is of course the Ar. *Ramadan*, which is the ninth month of the Arabic lunar year. (Root-meaning probably 'the burning one'.)

59. *Rasy*: a cape, headland; Swa. *ras*, is the Ar. *ras* (Heb. *rosh*), head, and then cape (just as we get 'cape' from *caput*).

60. *Sa*: "a provincial word for you, Sir! Swa. *saa*." Both the

definition and the reference to the Swa. *saa* (or *sa*) seem to rest on a misunderstanding. The Swa. *saa* or *sa* is at any rate an interjection, of about the same sense as the Greek and Latin *age!* and Krapf also puts it among the interjections (p. xxxix. of his Dictionary), although his translation of it is rather clumsy and misleading. The corresponding provincial Malag. *sa* I do not know. (cf. Ar. *iza*, lo! look here!)

61. *Sabry*: wait! Swa. *saburi*, is from the Ar. *tsabara*, to be patient. The Swa. *saburi*, however, is a noun (patience).

62. *Sadaka*: a sacrifice, offering; Swa. *sadaka*, offering, feast-offering, alms, is from the Ar. *tsadaga*, which means anything regarded as dedicated to God, as offerings, alms, etc. (Cf. Heb. *tsadaqah*, righteousness, which also, in post-Biblical Hebrew, acquired this wider sense. Comp. *jaka*.)

63. *Safary*: a journey, a voyage, etc.; Swa. *safari*. A purely Arabic word; *sefara*, voyage, journey.

64. *Saha*: field, country, out of town, etc., is scarcely the Swa. *shamba*, which seems to be only ground which is cultivated, which is exactly what *saha* does *not* mean. I should feel inclined to think of Ar. *sahla*, a plain, if I did not, from the nature of this word, think it unlikely that it has been introduced from any other language at all.

65. *Sahany*: a dish, a plate; Swa. *sahani*, is the Ar. *sahan*, of the same meaning.

66. *Sahidy*: a testimony, a witness; Swa. *shahidi*, is the Ar. *shâhid*, a witness (= Heb. *sahed*, a witness).

67. *Sahary*: a kind of checked cloth; Swa. *sahari* (so Krapf; *shari* in Malag. Dict.). The word is clearly Arabic; but Dr. Krapf seems to be wrong when he thinks that the cloth has got its name from a district, Sahari in Arabia; for in modern Arabic there is a verb *shahar* (also occurring under the form *shahwir*), which means to dapple, to chequer, which at once shews the origin of the word.

*Sahôa, sahôahôa, sâho, tsâho, siosio* are evidently different from the same root, all meaning 'our.' *Tsaho* and *siosio* are the only words in Imérina, the first meaning rumour in general, the second, the rumour that has scarcely become a rumour (a conscious perering between man and man), though that distinction is not drawn in the existing dictionaries. The other forms are provincial. A root occurs in so many different forms, I immediately suspect a foreign word, which the natives had difficulty in pronouncing; therefore have corrupted in many different ways. But the reference to *sauti*, voice, noise, can scarcely be right, as neither form nor meaning is. I have no doubt that the root is Ar. *shaa* or *shai* (*shayi*), to spread (as news); *shayi*, wide-spread; causative *ashi*, to spread; *mashâa*, widely divulged; *sâho*, rumour.

*Sahôby*: punishment, is the Swahili *azab*, punishment, from *azaba*, to punish, which in Swahili appears in the form *athibu*.

*Salâma* should not have been translated simply as "Swa.," as it is a word whose Arabic origin is known everywhere. The Arabic salutation is *as-salam*: "*Salam alek*!" ("Peace be to thee!"); and the response: "*alekes-salam*!" ("And also upon thee be peace!") Cf. Heb. *shalom*, peace; see also Judg. xix. 20; 1 Sam. xii. 18; Matt. x. 13. The original means integrity, healthy condition, and in this sense *only* is it used in the interior, but in the provinces it is also a salutation. The word is, of course, not more Swahili than Malagasy.

*Sâly*: a shawl; Swa. *shali* (*Asâly*). This is thought to be originally a Persian word, but the etymology points rather to the Ar. *shâl*, a skein, thread, and *shallil*, to tell; but what the history of trade has to tell about the origin of the word, I cannot say.

*Sâmbo*: a ship; Swa. *chombo*,

a dhow. In Makua a dhow is *ichombo*; in Zulu a ship is *umkumbu*. In Arabic *shauna*, plur. *showan*, means a ship, especially a man-of-war; but what connection there may be between these words I dare not say.

73. *Saba*: equal, level; Swa. *sawa*, is the Ar. *sawa* or *sawy*, of the same meaning.

74. *Sâra*, in *sâran-dâkana*, fare of a canoe (*lâkana*), cannot be the Swa. *mshahara*, wages, because this word means only *monthly* pay (from Ar. *shahr*, a month), which would not agree with the casual nature of payment for being ferried over a river. It seems to be the Ar. *ajer*, *ojra*, hire (*ajara*, to pay hire, wages).

75. *Sâry*: likeness; Swa. *sura*, is the Ar. *tsura*, form, figure. Cf. prov. *sâra*, form, figure (not in the Dictionary).

76. *Sarôaly*: pantaloons; Swa. *surwali*, is the Ar. *sarâwili*, breeches.

77. *Sâsa*: washed, is certainly *not* to be referred to the Swa. *osha*, as it is evidently identical with the Mal. *saisah*.

78. *Savôny*: soap; Swa. *sabuni*, is the Fr. *savon* and Ar. *sabuni*, etc. The form of the Malagasy word seems to point rather to a French than an Arabic origin.

79. *Simila*: "an imperative word. Get out of the way. . . Swa. *similla*, from Ar. *bismillah*." The translation given is the same as in Krapf, for the Swahili. The Malagasy I have never heard, as it is exclusively provincial; but I have a suspicion that the meaning attached to it is a much wider one both in Swahili and Malagasy. The word is an abbreviation of the Arabic phrase *Bi-ismi-illahi* (corresponding word for word to the Heb. *be-shem-eloah*), 'in the name of God,' which is the opening sentence of each chapter of the Qoran; and then it has gradually become something between an oath and an exclamation (cf. Eng. 'egad!' probably from 'by God!'), adding force to any expression.

80. *Sokany*: a rudder; Swa. *sukani*, is the Ar. *sukani*, which is used of what keeps the ship steady (same root as Heb. *shaken*), either in going (a rudder), or in harbour (an anchor).

81. *Sokary*: sugar; Swa. *sukari*, is *not* "from a root common to both the Indo-European and Shemitic (in Dictionary Semetic) families of languages," not more so than *book* (Eng. book) is from a root common to English and Malagasy. The word is purely Indo-European, but introduced into many other languages, as Arabic, Persian, Swahili, Malagasy, etc.

82. *Sirat*: "writing, markings, colour. Mal. *soorat*; comp. Ar. *surat*; Swa. *sura*." This reference is very misleading, as it gives the impression that the word is of Malay origin, and that you *may* compare Arabic with Swahili; while the truth is (a) that the word is Arabic, and has been pointed out as such long ago (ANNUAL No. II. p. 86); (b) that the Mal. *surat* (why write '*soorat*'?) is simply the introduced Ar. *surat*, and is also duly marked 'Arabic' in Malay dictionaries (e.g. in Crawfurd); (c) that the Swa. *sura* is quite a different word—the Malag. *sary*, which see, and the provincial *sira* (form, figure), overlooked in the Dictionary.

83. *Serotà, sérotàny*: a chief man, a sultan; Swa. *sultani*, is of course an Arabic word. The root is *salita* (Heb. *shalat*), to be in authority, from which we get the derivation *sultan*, authority, power, which, by metonymy, comes to mean a man possessed of power, etc., a sultan. Cf. Heb. *shilton* and Chal. *shaltan*.

84. *Tàba, tábatàba*: "noise, clamour, political tumult, etc. Comp. Swa. *taabu*, trouble." The word is evidently onomatopætic, and the conception too national to make us think of a foreign word, even if its form and meaning agreed better with the Swahili word than is actually the case.

85. *Tabòry*: round, the testicles; Swa. *tamboa*. If I did not consider the word to be a pure Malagasy one,

I should suspect it to be the Ar. *dabtr, virilia*. (In Zulu, *dolo* has the second of the above meanings.)

86. *Tàky* is certainly *not* to be looked for in the Swa. *taka* (=Ar. *taqa, desideravi*), when we have the Mal. *tagih* in the special sense of the Malag. *mitàky* (to dun for a debt).

87. *Tàratibo*: gently, easily; Swa. *taratibu*, orderly, comes from the Ar. *tartib*, order.

88. *Tsy*, not; Swa. *si*, belongs, I think, to the original African element in Malagasy. In Zulu and Kafir it is written *ga* (i.e. *a* with a 'click' before it).

89. *Tsiota*: six. If this, as suggested in the Dictionary, is the Swa. *sita*, it is the Ar. *sittle*, six. (Cf. what has already been said about the numerals in Swahili.)

90. *Vazimba*: "the reputed aborigines of the interior," is referred to "Swa. *wazimu*, an ogre, a mad person, and *kuzimu*, in the grave." Perhaps we had better compare the Swahili root *zimu*, to die, disappear. It might then mean 'those passed away,' and be a name given by the Hova after they had annihilated the original inhabitants or driven them out of the interior; but the name is too widely spread both here and in Africa to admit this explanation.

91. *Vdantàngo*: the water-melon; Swa. *tangu*, a kind of pumpkin. This seems to be an original African word in Malagasy. It is also found in Zulu, in the form *itanga*; Nyamw. *liungu* (pl. *mungu*), bottle pumpkins, and *limtana* (cucumber), which seems only a corruption of *litangva* ("a water-melon, eaten raw like a cucumber"), which is the word in Yao; Makua, *ntanga*, cucumber.

92. *Zabàdy*: civet; Swa. *zabadi*, is the Ar. *zebàb*, civet (the scent); the animal is called *qutt ez-zebàd*. The Eng. 'civet' is the same word.

93. *Ziha* (root of *mizaha*, to examine) is wrongly referred to the Swa. *tazama*, to look, which word is rather the root of *mitàzana*, to look around, to look at distant objects. See this word among my additional ones.

*Zakidy*: excellent; Swa. *zar-*. The Swaheli word should be in *zayidi* (or *saidi*), but even so reference would not be right, as dverb 'more' could not, without special trick, be turned into the active 'excellent.' *Zayidi* is not the Ar. *jayid*, excellent.

*Zamany*: ancient, old; Swa. *mi*. The Swa. *zamani* or *sa-* is the Ar. *zeman*, time, era.

*Zaza*: a child, an infant; Swa. *zaa*, to beget, *uzazi*.

As *zanaka* has the appearance of the Mal. *anak*, with the *za*, I have always thought that this word and *zaza* were only indications of the Malayan word; the Swa. *zaa* has put me on the right track. If this root had been only in such a mixed language as Swaheli, I should not have considered it of much importance; but it is evidently traced even in such a representative of the Bantu group as the Zulu. Here *zi* means property in children; *zana*, all family; *zalo*, offspring, progeny; *zala*, birth (and *semen virile*), the verb *zala*, to beget, generate.

The common root of all these evidently *zi* or *za* (=Swa. *zaa*). The child is called *zeze*, which is very near the Malagasy *zaza*. For this I should consider *za* a true root in Malagasy and refer to *zaza* and *zanaka*, and perhaps *zafy*, grandchild.

*Zo*: renown, celebrity, good name, has certainly nothing to do with the Swa. *zuri*, handsome (which by the way, is only the adjective name *tsura*, form, figure, which is referred to under *sary*). It is the r. *ja*, power, dignity, fortune, occurs under the form *chaha* in Swaheli.

#### SWAHELI WORDS IN THE APPENDIX.

*Adohôry*: noon, is said to correspond to Swa. *athuuri*, which I find in Krapf; but it is, at least, evidently the Ar. *ez-zuhur*, the root (*zahaa*, akin to *tsahar*,

to shine) is familiar to every Semitic scholar.

99. *Aina*: life, may, as suggested by me before (ANNUAL No. II. p. 87), be connected with the Ar. and Heb. *hai or chai* (living), which has also passed into Swaheli; but it seems more likely that it belongs to a group with a much wider meaning and more widely spread than the Semitic word. But I cannot enter into this question here, as it would lead to the examination of perhaps half a hundred allied words. I have collected materials for a monograph on it, but am rather afraid it will never appear.

100. *Ajima*: prodigious; Swa. *azima*, a charm, is the Ar. *azime* (ancient Ar. *azimatum*), a guardian charm; originally, an enterprise, from *azama*, to take in hand, to do.

101. *Akama*. If this has the same meaning as *namana*, companion, it can scarcely be the Swa. (i.e. Ar.) *kama*, which, like the identical Heb. *kammah*, means only 'like what?' 'how much?' 'how often?' (Arabic also simply 'like as.')

102. *Bandra*: "a kind of red cloth introduced by the Arabs, a flag," is referred to Swa. *bandera*. The word is, however, a Spanish (or Portuguese) one. *Banda* in Spanish means a troop (like Eng. band), and *bandera*, its standard. Hence it gradually got the meaning of flag (in Spanish), and was in this sense adopted by the Arabs, who now use it side by side with their own native word *bairaq*. And as the Arab flag is red, the natives of East Africa also called the red cloth they bought from them by the same name. In this way it there got the additional meaning of 'red cloth,' which is also attached to it here. It is, however, here generally applied to the red yarn, in skeins, sold by the Arabs. The word has entered into most European languages with many variations, as *bandiere*, *banniere*, *banner*, etc. And if we go back to the root *band* (Sansk. *bandh*), that which binds together, we find it branching out into almost all Indo-European languages.

103. *Bdofitsy*: blanket, is referred to the Swa. *bushuti* (a cloak of black cotton); but this identification seems impossible, for the Malagasy word is not applied to a cloak, and not even to a *black* blanket, but only to a *white* one. This certainly favours the explanation I have given in ANNUAL No. II. p. 84.

104. *Haody*: a word used when knocking\* at a door; Swa. *hodi*, of the same meaning. I believe this word to be Arabic, for the following reasons:—(a) It is not likely that the natives of East Africa had any word for it, as their huts have scarcely any doors to knock at; and as the custom of knocking suggests a stage of civilization above that which they have arrived at, they must have been taught to do it before they did so. But their first teachers of manners were certainly the Arabs. (b) The Ar. interjection *haiti* or *haitu* (come here! look here!) agrees sufficiently well with *haody*. Krapf, however, refers us to the Ar. *hada*, to guide, lead the way. If so, it must be the imperative *ahdi*, guide (me), with the first two letters transposed. (The 'Mahdi,' whose name we have so recently constantly seen in all newspapers, is a name formed from the participle of this verb [the leading, i.e. the leader].) (c) The answer (from those inside) to this call is, in Swaheli, decidedly Arabic (see *karibo*), and the corresponding Malagasy is a translation of it. A Malagasy does not say what, to us, would seem most natural, 'Come in!' but, 'Proceed!' 'Draw near!' ('*Māndrosda*.')

105. *Hāta*=*hātra*: until, up to; Swa. *hatta*, is certainly the Ar. *hatta*, until, as far as (chiefly of time).

106. *Kanika*: blue cloth; Swa. *kaniki*. Is not this merely a corruption of 'calico'?

107. *Laoka*: "any relish, or meat eaten with rice. On the coast it almost

always means fish or vegetables." This has certainly *not*, as suggested in the Appendix, any connection with Swa. *luththa* (flavour). The Malagasy word is surely Malayo-Polynesian, as it occurs in the forms *uka*, *ika*, or *ikan* in many Polynesian languages. How this *uka* or *ika* may become *lauka*, through the addition of the demonstrative *la*, is seen in the Dayak *lauka* (a fish), and the Malagasy *lauka*, which probably was also identical with 'fish,' as long as the Malagasy, like most of their kinsmen eastwards, had only fish for their relish. When other things were added, the meaning of the word gradually became wider.†

108. *Sāba*: seven; Swa. *saba*, is of course the corresponding Ar. numeral (Heb. *shibea*); cf. no. 89.

There are a good many suggested identifications I should feel obliged to demur to, e.g. those of *jāly*, *karakāra*, and *kāsa* in Appendix, which I have passed in silence. Some few alleged Swaheli words I have not been able to find in Dr. Krapf's Lexicon; among these are the following:—

Malag. <i>mōfo</i>	referred to Swa. <i>mofo</i>	(App.)
" <i>vazāha</i>	" "	<i>waja</i> (Dict.)
" <i>serimāla</i>	" "	<i>sermala</i> (Dict. and App.)
" <i>māny</i>	" "	<i>many</i> (App.)
" <i>fārasila</i>	" "	<i>frasila</i> (Do.)

I am unable to say whether these references have been given by mistake, or whether the Swaheli words in question are to be found in Dr. Steere's *Handbook*, which I have not at hand. In the case of *mofo*, I suspect a misprint for *mofa*, which, in Swaheli, according to Dr. Krapf, means a baker's oven (especially the kind in use on board ship) for making bread, but not bread itself, although one can easily imagine how this latter meaning may have originated from the former one. The word *mofa* is

\* But neither in the Malagasy nor the Swaheli Dictionary is 'knocking' mentioned, nor is it the Malagasy custom to knock. *Haody*! is the polite request for leave to enter a house. This point of the argument therefore loses its force.—EDS.

† See Rev. W. E. Cousins's note on *Laoka*, ANNUAL No. VIII. p. 124.

the Ar. *mufa* (*mifa*, *mifan*), an oven, or rather the projecting part of it (from *wafa*, to stand out, project), where the bread is made.

But the word I miss most of these five is *waja* (*vazaha*), as I have long been looking for an explanation of the word by which we foreigners (*vazaha*, foreigner, white man, i.e. a European or American) are designated. The Dictionary says that this (missing) *waja* means "foreigners, literally, those who have come (over the sea)." But Mr. W. E. Cousins, whose source of information was Dr. Steere's *Handbook*, tells us that "*Vazaha* or *Wazaha* means a sharper" (ANNUAL No. II. p. 22). This sounds rather shocking; but as I can find no authority for any of these explanations, I must try a new one. *Ajam* in Arabic means one who cannot speak Arabic properly, then a barbarian (cf. Greek *barbaros*). They first applied it to the Persians, and then to foreigners generally. Now this word has been introduced into Swaheli too, and here it forms its plural by the prefix *wa*, which gives us *wajam* as the name of foreigners. The Malagasy *vazaha* I therefore consider a corruption of this word.

#### C. ADDITIONAL WORDS.

I wish it to be clearly understood that the following Swaheli words in Malagasy are only those I have happened to light upon while examining the Swaheli words given in the Dictionary. If I had purposely searched for them, I should no doubt have found many more.

1. *Abily* (for *abidy*): a slave, is the same root as the Swa. *abuda*, to serve, and *abida*, service. The root is African and the same as *abad*, *ebed*, in Hebrew. It has nothing to do with *vidy*, as suggested in the Dictionary.

2. *Ady* and *adivy* are both to be referred to the Swa. *adui*, an enemy, which is derived from Ar. *udwa* and *adwa*, enemy and enmity.

3. *Afaka*: freed from, may be Swa. *afu*, delivered from.

4. *Baba*: father; Swa. *babu*, is a genuine African word. Zulu, Sofala,

Tette, Sena, Quillimane, *baba*; Cape Delgado and Yao, *vava*. It may be radically connected with *aba* (a reduplication of it?). I do not mean that the Semitic *ad* has been introduced into all these languages, but that a cosmopolitan root *ad* may be at the bottom of them all.

5. *Bàby*: root of *mibàby*, to carry a child on the back, is the Swa. *beba*, of the same meaning.

6. *Dàda* (and *àda*): father, is the Swa. *dada*, father (chiefly used by children). These words occur in a great many African dialects under an almost endless variation of forms. I have noticed the following: *da*, *ada*, *dada*, *tada*, *tata*, *taata*, *nda*, *atati*, *athithi*, etc.

7. *Emba* (or *nèmba*?): root of *vdanèmba*, French beans; Swa. *mbumba*; Sofala, Tette, Sena, *nyemba*; Maravi, *niemba*; Quillimane, *myamba*; Zulu, *imbumba*. Whether the initial *n* belongs to the root or not, it is difficult to say. Cf. *tango*, or *ntango* (?), as root of *voantango*. Probably a genuine African word.

8. *Fàdin* - *tserànana* (customs dues) has always been an etymological puzzle. That the first part has nothing to do with the Malagasy *fàdy* is obvious. It seems to be the Swa. *fayida*, Ar. *faid*, gain, profit. *Serànana* now chiefly means a port, a harbour, but is also used of any place (even inland) where there is a collection of revenue, as customs dues, etc. This I take to be the Ar. *sheranun*, commerce, trade. The meaning of the whole would be 'income from commerce,' which is what the Malagasy word means. And as this commerce was almost exclusively confined to sea-ports, *seranana* naturally came to mean a port.

9. *Fànga*: a harlot, used as root of *mijàngajànga*, to commit fornication; Swa. *zinga* (also written *singa*), to stroll about seeking for women, etc. Cf. Zulu, *pinga*, to commit adultery.

10. *Làly*: coitus, *milily*, coire, seems radically connected with Swa. *lala*, to recline, to lie down to sleep.

11. *Liana* (and *lika*): greedy, vehemently desirous of food, having a strong appetite, is to be referred to a root *li* or *lia*, of decidedly African origin. Swa. and Yao, *lia*; Makua, *ulia*; Nyamw. *lya*; Zulu, *ala*; which all mean to eat. In other dialects it is changed to *di* or *ri* (e.g. Tette, *ku-dia*; Sofala, *ku-ria*), but still retaining the same meaning.

12. *Ngārana*: root of *mangāranga*, shining, transparent, is the Swa. *ngara*, shining, transparent. In the Dictionary the verb is referred to the root *hārangārana*, peeped at through a hole (!), but wrongly, as is proved by the different meanings of these words.

13. *Sitasita*: desire for a quarrel, seems to be Swa. *suta*, to charge one publicly with a fault, etc.

14. *Tāpaka*: broken, a part broken off from the whole; Swa. *tapo*, division, a part of the whole.

15. *Timboka*: pierced through, stamped, commenced, is the Swa. *tumbuka*, to make a hole, *tumbua*, to perforate.

16. *Vahiny*: stranger, I should refer to the Swa. *geni*, strange, foreign; *mgeni*, a stranger, a foreigner; pl. *wageni*.

17. *Vidy*: price, may be the Swa. *fidi*, to redeem, to buy; from Ar. *fada*, to redeem, and *fida*, price of redemption.

It is now about nine years since I wrote my article on "The Influence of the Arabs on the Malagasy Language" (ANNUAL No. II. pp. 75-91); and much has since then been done to elucidate the Malagasy language, and especially the knowledge of the provincial dialects has increased very much. Therefore it is now much easier to detect Arabic words in Malagasy, as most of them are to be found in the provinces. In the lately issued Reprint of the first four numbers of the ANNUAL I added a few new Arabic identifications; and in the present article I have found occasion to allude to a good many more. Turning over the leaves of the new Dictionary I have found some few which are not touched upon here, as they are not found in Swahili and consequently did not concern us. But the whole subject of Arabic identifications of Malagasy words would now be well worth a separate article. The same is in still greater measure the case with the purely African element in Malagasy. There are certainly scores of interesting identifications to be made; and many of these African words are of such a nature that they *could not* have been introduced here in more recent times. They seem to me to prove the original African settlement here in the same way as the Celtic words in English, even without influencing the grammar, prove that the Celts lived in England before the Anglo-Saxons. If time allows, I should certainly like to take up this subject; but, for the present, I cannot do more than hint at what ought to be done.

IV. The following points may be noted as embodying a brief summary of the subject:—

1. The Malagasy being essentially a Malayo-Polynesian language, and the Swahili a Bantu language, there is, upon the whole, no more real relationship between the two than between the two families to which they respectively belong.

2. There are, however, a good many single words,—apparently from two to three hundred—to some extent common to both languages.

3. As these words are chiefly names of articles of trade imported here from East Africa, it is evident that they are *Swahili words in Malagasy*, and not the reverse.

4. These Swaheli words in Malagasy are, with very few exceptions, provincial, and chiefly to be met with on the coast, especially the west coast. In the interior most of them are unknown. I believe any one could live ten years in the Capital, and converse freely with the people, without ever hearing one-tenth of them. They have never passed into the *succum et sanguinem* of the Malagasy nation. In this respect they are very unlike the earlier introduced purely Arabic names of days and months, which have become common property.

5. Some of those apparent Swaheli words in Malagasy are not introduced through the Swaheli, but belong to the original African element in Malagasy (e.g. *omby*, *akoho*, *amboa*, and probably *akanga*). Their character, and the canon for discriminating them from the introduced Swaheli words, has already been given (pp. 102, 103).

6. Others are not of African origin at all. Some few are in fact common to both Orient and Occident (e.g. *saly*, *savony*, *bandera*), and it is therefore difficult to tell from what sources they have been imported into Madagascar, with the exception of those few cases in which the peculiar form they have taken proves a guide. But many more are evidently Arabic, although they have in most cases been introduced here by traders from the Swaheli country, and therefore through the medium of the Swaheli language, as very few traders here have come direct from Arabia.

7. It should be observed too that the Arabic element in the Swaheli words introduced into Malagasy is somewhat greater in proportion than in Swaheli itself. This agrees well with what we should expect to find, as most of the Swaheli traders who have come into any close contact with the Malagasy have certainly been people of Arabic extraction; and the terms chiefly in use in their trade and business have most likely been the very words which their Arabic ancestors felt it necessary to introduce into Swaheli, as that language originally had no names for such things and doings as were introduced among them by the Arab foreigners.

L. DAHLE.



## NATURAL HISTORY NOTES.

### NEW GENERA OF MALAGASY PLANTS.

THE following new genera of plants from Madagascar are described by Mr. J. G. Baker, F.R.S., of Kew, in the *Journal of the Linnean Society* for December, 1884 (vol. xxi. Nos. 136 and 137):—

*Sphærosepalum* (Nat. Ord. *Guttiferæ*); *Rhodoclada* (Nat. Ord. *Lineæ*); *Neobaronia* (Nat. Ord. *Leguminosæ*); *Phornothamnus* (Nat. Ord. *Melastomaceæ*); *Phellolophium* (Nat. Ord. *Umbelliferæ*); *Melanophylla* (Nat. Ord. *Cornaceæ*); *Holocarpa* (Nat. Ord. *Rubiaceæ*); *Apodocephala* (Nat. Ord. *Compositæ*).



All of these, except *Melanophylla*, are as yet represented by but one species. *Sphaerosepalum* (*S. alternifolium*) is a shrub (or tree?) found near the east coast. *Rhodoclada* (*R. rhopaloides*) is a shrub (or tree?) found in Antsihanaka. *Neobaronia* (*N. phyllanthoides*) is the well known *hàrahàra*. In last year's ANNUAL, p. 113, I said that this tree would probably prove to belong to a new genus, which is now seen to be the case. *Phoranthamnus* (*P. thymoides*) is an undershrub found in the forests in the eastern parts of the island. *Phellolophium* (*P. madagascariense*) is an herb five or six feet high with aromatic seeds; it is known as *tsilondroàho*. It grows in valleys in Betsileo, at the foot of Ankaratra, and near the forest in Eastern Imerina. There is another species, probably also belonging to this genus, about half-way up the eastern side of Ankaratra, but I have not yet succeeded in finding it in flower and fruit. *Melanophylla* (*M. alnifolia*, and *M. ancubefolia*) are shrubs (or trees?) found in the forests of Eastern Madagascar. *Holocarpa* (*H. veronicoides*) is a perennial herb found in Central Madagascar. The genus is allied to *Otiophora*. *Apodocephala* (*A. pauciflora*) is a resinous tree found in the forest of Eastern Imerina, and is known as *tsindràmy*.—ED. (R.B.)

#### NEW MALAGASY PLANTS.

Among the new Malagasy plants lately named and described in the *Journal of the Linnean Society* by Mr. J. G. Baker, F.R.S., are the following:—

*Rhodolæna acutifolia*. This is a large tree, growing in the forests east of Antsihanaka, and is used in house-building. It has beautiful large flowers, somewhat similar to those of *R. altivola*, Thouars. This latter plant was discovered nearly a century ago by Du Petit Thouars.

THE *Loviantсахона*. The *loviantсахона* (or *viliantsàhona*) is the name of an herb found very abundantly in rice-fields, by stream sides, and in marshy places, throughout Central Madagascar. It proves to be a new species of *Hydrocotyle*, and has been named by Mr. Baker *H. superposita*.

TWO NEW SPECIES OF *Schismatoclada*. Two more new species of *Schismatoclada* (*S. concinna*, and *S. viburnoides*) have recently been found in the forest of Eastern Imerina. As this genus of plants is closely allied to *Cinchona*, it would be interesting to know the result of an analysis of the barks of these shrubs.

FOUR NEW SPECIES OF EBONY. Four new species of ebony have been lately found in the island, which have been named and described by Mr. Baker. They are *Diospyros fusco-velutina*; *D. megasepala*; *D. sphaerosepala*; and *D. gonoclada*. The first of these is found on the east coast (Fènoarivo); the second and third are found in the forest to the east of Antsihanaka; and the fourth somewhere between Imerina and the east coast.

THE *Tsimperifery*. In the collections recently sent to Kew there is a new species of pepper plant, which has been named by Mr. Baker *Piper pachyphyllum*. It is very nearly allied to *P. borbonense*, C. DC., and is known by the natives by the same name (*tsimperifery*).

THE *Aviavy*, *Voàra*, ETC. The *aviavy* is a large tree, a species of *Ficus*, common about villages in Central Madagascar. It proves to be new, and Mr. Baker has named it *Ficus megapoda*. Another closely allied species, known as *aviavimamiemby*, found also about villages in Central Madagascar, has been named *Ficus podophylla*. The *voàra*, a large tree found also in the central parts of the island, is also a new *Ficus*, and has been named

*Ficus tiliaefolia*. It may be here stated that all the *Fici* recently sent to Kew, sixteen in number, were hitherto unknown to science. Two species of *adabo* (*Ficus*) have quite lately been sent, and will also probably prove new.

THE *Sampivato*. This is a well-known subscandent shrub with stinging hairs. It is found in woody places in Central Madagascar. It proves to be a species of *Urera*, and has been named *Urera sphaerophylla*.

THE *Hetatra*. The *hetatra* is a tree found in the forests of the interior which yields a valuable timber extensively used in house-building. Mr. Baker has named it *Podocarpus madagascariensis*. It is nearly allied to the Cape *P. Thunbergii*, Hook.

THE *Hasina*. The *hasina* are species of *Dracæna*, the most common of which is, I believe, *D. angustifolia*, Roxb. There is a species of *hasina* at Ambatovôry and other places which proves to be new. It has been named *Dracæna xiphophylla*.

THE *Oviâla*. *Dioscorea acuminata* is a new species of *oviâla*, the root of which is much sought after as food by the natives.

THE *Zozoro* (*Cyperus imerinensis*, Boeckl.). It is somewhat of a surprise to find that the *zozoro*, so common in the marshes, is most likely a new species. It is very nearly allied to the Egyptian Papyrus. (ED. R.B.)

#### THE ORCHIDS OF MADAGASCAR.

Mr. Henry N. Ridley, M. A., F. L. S., of the British Museum, has lately read a paper before the Linnean Society on "The Orchids of Madagascar," and the following are his preliminary remarks :—

"The Orchideæ of Madagascar, as far as they are at present known to me, belong to 30 genera containing nearly 140 species; but it is to be expected that this number will be largely increased when the botanical riches of the country are more fully explored. This paper must therefore be only considered as a prodromus, giving an account of the species hitherto described or figured, together with those novelties which have come under my personal observation in the great herbaria of the British Museum and Kew.

"It would at present be premature to base any arguments as to the origin of the flora of Madagascar upon the distribution of the genera and species of Orchideæ as at present known; but it will be of interest to examine the list and compare it with that of Africa and Tropical Asia.

"The Epidendreæ are represented by 6 genera, two of which, *Oberonia* and *Cirrhopetalum*, are interesting from their absence from Africa, the remainder also being more extensively developed in Tropical Asia than in Africa. Of the Vandæ there are 11 genera, four of which, so far as is certainly known, are confined to the Mascarene archipelago; one, *Polystachya*, is distributed over both hemispheres; the remainder are either exclusively African, as *Lissochilus*, or are most abundant in Southern and Tropical Asia. The genus *Acampe*, however, is probably more of an Asiatic type than of an African one. The small number of Neottieæ gives somewhat of an African facies to the list. There are only 4 genera: one, *Gymnochilus*, is exclusively Mascarene; the others consist of the two widely distributed genera *Corymbis* and *Pogonia*, and *Monochilus*, which is chiefly Malayan. The Ophrydeæ are very well represented. There are eight genera, of which two are only known from Madagascar, viz. *Bicornella* and *Platycoryne*; one is found also in the other islands of the archipelago, viz. *Cynorchis*. Of the rest, two occur also in Africa; and two, *Disperis* and *Satyrium*, while occurring in India, are most abundant in Africa.

"Thus, broadly speaking, we may say that the Epidendreæ are typically Asiatic, while the remainder are more of an African character.

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"As might be expected, a large proportion of the species are endemic; and but few have a distribution further than the archipelago or neighbouring coasts of Africa. The most widely spread species are *Cirrhopetalum Thouarsii*, perhaps the most widely distributed of all epiphytic Orchids, extending its range as far east as the Society Islands, and *Corymbis corymbosa*, which is found also in West Africa."—ED. (R.B.)

THE 'AGY' TREE. X

Journeying downwards to Mojangà, on the north-west of Madagascar, homeward bound to England, in the month of June, 1879, I travelled (with wife and children and native attendants) for some days down part of the Ikôpa river from Mèvatanàna to Mârovoay ('Many-crocodiles'). The weather was hot, as it always is in these parts; and one day, in the early part of the afternoon, we were glad enough to come in sight of a pleasantly shaded resting-place on the right bank of the river,—green and fair—and overhung with trees. It was the usual resting hour for the boatmen when we arrived there; and all of us were exhausted with the heat and in need of food and rest and shelter from the sun.

We were glad therefore to draw up our canoes alongside the pleasant bank; and after I had seen my wife and children safely placed, and the *mâromita* (bearers) had selected a spot on which to kindle the fire for dinner, I strolled around the place. Walking under some trees and pushing aside the reeds and rushy grass, I was startled, in a moment, by a sudden tingling and pricking sensation over the back of my hands and fingers,—a strange sensation, for never before had come the like to me, in Madagascar or elsewhere. I stopped at once in sudden surprise, for the pain was severe, and I had touched nothing, save perchance the long grass and rushes between the trees. But in another moment the pain increased, the tingling burning sensation seemed extending rapidly up my wrists; and as I bent my head down to look closely for the cause of the mischief, nothing was seen. But even as I lowered my head to look, pain, scalding pain, shot into my ears and neck, and growing worse too, every instant.\* Dazed and bewildered, I stood a few seconds in helplessness, for I could neither see nor guess at the cause of the terrible distress. Then with awakened instinct I drew softly back, away from the 'uncannie' spot, and got back to my company with agony writ plain enough over every line of my face.

25- The men started up when they saw me, some of them crying out, "*Efa voan' ny Agy hianao*" ('You have been smitten by the Agy tree'). Some of them led me to a seat, others rushed for water from the river, which they fetched plentifully, and two or three hurriedly brought sand and earth heaped in their hands. Then they chafed me with the sand and water that they might take out the *lay* (stinging hairs), they said, for that was the name by which they knew the cause of my sufferings. As they scrubbed me, I felt the pains abate; and after about a quarter of an hour's continuance of the operation, I was comparatively free from pain and was able to join in the rice-dinner which was soon ready. And before we left the place that afternoon, my tortured cuticle was quite well again.

While the men were rubbing me, I was able to discern to some extent the cause of my distress. Countless hairs, like tiny arrows, almost transparent, pointed apparently at either end, and from a third to a fourth of an inch long, had dropped down on me in an invisible shower from the Agy tree as I

\* A similar experience happened to myself on my way to Mojangà. The sensation, which was most painful, reminded me of the sting of a nettle, but was ten times more virulent.—ED. (R.B.)

passed and stood under its branches, which were gently stirred by a soft wind. My clothing and the pith helmet on my head had protected me at first, excepting my exposed hands. Then the bending of my head had exposed my neck to the falling plague. Ere I came away that afternoon, very cautiously I ventured to examine the tree at a little distance; and some other of the same species were pointed out to me near the same place by the natives. The little hair-like shafts were growing enclosed in a thickish pod or shell, not quite so large, perhaps, as a small banana fruit. Each shell appeared to be closely packed with these little spines. If my memory serves me, these lay transversely and in double rows or stacks across the interior of the pods. These latter were fully ripe (unluckily for me) just at that very time, and the light wind was emptying out the contents.

I saw no more Agy trees on the remainder of our journey; and had never even heard of them before during the nine years of my residence in the island. But the *maromita* told me that day that, in former times, the Agy was well known in Imerina, the district where I had lived. It is a tradition among the people, they said, that once upon a time, long ago, when the wild Sakalava tribes had laid siege to Ambôhimanga, the former Capital of Imérina, some of them, unacquainted with the Agy trees, had come under their dangerous branches. Stricken with hot pain and sudden alarm even as I was, and deeming, I suppose, that the gods were fighting against them, they fled away in terror, and the Hova Capital was saved by its Agy trees.

W. MONTGOMERY.

*Note.*—According to some native accounts, the trees whose stinging properties caused the invading Sakalava to retire in terror from Ambohimanga, as above described, were the *amiana* (which are species of *Obetia*), trees with tall straight stems and bearing large velvety leaves which sting like a nettle when touched. Some of the leaves on the young trees are very large, about twenty inches each way, and are very beautiful in outline, being deeply cut and indented. These trees still grow plentifully on the summit and slopes of the hill on which Ambohimanga is built, as well as in many other places, but the *agy* is not known there.

The *agy* is most probably *Mucuna pruriens*, DC., the specific name *pruriens* being very apt. It is sometimes called the Cowhage, and is cosmopolitan in the tropics. It is used in some countries as an anthelmintic. The *agy* is not 'a tree,' but a climbing plant, and the stinging hairs are on the *outside* of the pod.—EDS.

#### MADAGASCAR SILK-WORMS.

"A certain Père Paul Cambozé (a Jesuit) has sent from Tamatave a notice which has been eagerly reproduced by reviews treating of the Silk trade. He there describes two species of silk-giving Bombycidæ (*Brocera madagascariensis*, Boisduval, and *Saturnia suraka*, id.), whose silk is manufactured by the Malagasy for the making of their magnificent cloths called *lamba lândy*."—*Missions Catholiques*; no. 784, quoted in *Bull. Soc. de Géog. de Lyon*; 9me livr. t. 5me, Avr. et Mai 1885; p. 486.

#### PROTECTIVE RESEMBLANCE IN INSECTS.

In rambles through the forest near Ambôhidratrimo in December of last year I was several times struck by the curious formation of the wings of one of the smaller species of butterfly common in these woods. The insect in question is of plain inconspicuous colouring, chiefly shades of brown, and, when at rest,

sits with the wings erect and nearly touching one another. The curious point about it is that there are several somewhat strongly marked and dark-tinted processes from the hinder points of the wings, which resemble the head, eyes, and antennæ of a butterfly, so that when at rest it is very difficult to say which is the head and which is the tail of the insect. The tail markings and points are so much more strongly emphasized than the actual head and antennæ that it is only when the wings slightly open that one is undeceived. Mimicry of one insect by another, and mimicry of leaves, grass, etc., by insects, are of course well known facts, but I do not remember to have seen any similar instance noticed of that of resemblance between the different parts of the same insect; but may not the reason of this mimicry of the head by the tail be of some service in directing the attention of birds and other enemies to the less vital part of the butterfly's structure? It is evident that the hinder portion of the wings might be snapped at and broken off, and yet no serious injury be done to the vital parts of the insect. However this may, the point appears to me to be worth noting down as a curious fact.—ED. (J.S.)

## BRIEF SUMMARY OF IMPORTANT EVENTS IN MADAGASCAR DURING 1885.

**POLITICAL.**—<sup>X</sup>THE FRANCO-MALAGASY WAR. It is now nearly three years since the French commenced hostilities against Madagascar, but as yet they have made little progress in their warlike operations. During the last twelve months there have been one or two somewhat serious military engagements, numerous petty skirmishes, frequent bombardments, and lengthy negotiations, all of which, however, have been utterly ineffectual in "bringing the obstinate Hova to reason," or in compelling them to acknowledge "the rights of France over Madagascar." The following are the chief events which have occurred during the year with regard to the Franco-Malagasy difficulty. Some time ago Admiral Miot asked for an additional force of 3000 troops, by the aid of which he hoped to be able to take the Hova position of Manjakandrianombana and bring the Malagasy Government to terms. Soon after the arrival of these troops therefore the French in Tamatave made an attack

upon Manjakandrianombana, but, after seven hours' fighting, they were repulsed and compelled to retire, carrying with them, it is said, a large number of wounded and some killed. This was the most serious engagement that has occurred during the whole history of the war, and, as was natural, the defeat which the Hova have inflicted upon their enemies has inspired, not only the native soldiers, but the whole of the people, with confidence and courage.

Another event of considerable importance connected with the Franco-Malagasy war,—if the present ignoble imbroglio deserves such a name—is the chastisement inflicted by the Hova upon certain Sakalava rebels in the north-west of the island, who had allied themselves with the French and taken up arms against the Sovereign. In order to quell the insurrection, a force was sent from Antananarivo some eight or nine months ago under Andriantsilavo, 14 Honours. After several weeks' march, they came within a few miles of Jangôa,

the seat of the rebellion, a town situated on a river of the same name, some twenty miles east (or north-east) of Anorontsanga, opposite the island of Nòsibè, and not far from Ambòdimadiro. Jangoa was surrounded by the Hova one morning before the rebels were aware of danger, and the town was burned to the ground. Soon afterwards, the French and Hova forces met at Bèftina. The French commander, it seems, was killed on the first onslaught, and in spite of the machine guns and mitrailleuses directed against them, in spite of a sudden and unexpected attack on their right wing by a band of Sakalava, the Hova succeeded in thoroughly routing both the French and their native allies and gained a complete victory.

The last act of the French is the blockade of Vatomandry, now the chief port on the east coast of the island. This, however, inflicts no great injury upon the Malagasy; the only persons who are seriously inconvenienced thereby being the foreigners, whether merchants or others, who are much more dependent upon the outside world than are the natives.

During the year negotiations have been going on between the French representatives and the Malagasy Government through the medium of M. Maigrot, the Italian Consul. These negotiations have been published by the Hova Government in a 'Red-book,' from which it appears that the claims which the French make are as follows; a Protectorate of the whole island; permission to place a Resident, with a guard of soldiers, in Antananarivo, besides officials in various parts of the country; and the collecting of the customs at the various ports by persons appointed by the two powers. The Malagasy, seeing of course that this is almost equivalent to annexation, flatly refused to accede to any such terms. At the present time negotiations are again going on between the two powers, which we sincerely hope may lead to a satisfactory termination of the war.

STATIONING OF NEW GOVERNORS. During the year a large number of Governors and Lieutenant-Governors with their suites have been appointed by the Central Government to important stations in distant parts of the country. This is in continuation of a policy of reform commenced some years ago, whereby the Hova officials in these places, mostly old men, out of sympathy with the modern regime, and frequently incapable and untrustworthy, are being gradually substituted by individuals of a more intelligent and upright character.

LITERARY.—REVISION OF THE MALAGASY BIBLE. The Bible Revision Committee has continued its work as usual during the year and has revised 152 chapters, viz. from Sam. iii. 25 to the end of Malachi (excepting the Psalms), thus completing the first revision, and Gen. i-xxiii. (commencement of the second revision). The first revision was completed on Wednesday, Oct. 8th. From a leaflet recently issued by Mr. W. E. Cousins we learn that "the revision was begun Dec. 1, 1873, but was suspended from Mar. 7, 1876 to Oct. 28, 1878, owing to the absence of Mr. Cousins on furlough; the work has therefore occupied the Committee a little more than nine years. The Committee has sat on 433 days, and has held 771 sittings, chiefly of three hours each." The second revision was commenced on Wednesday, Nov. 4th, and will, it is hoped, be completed in about eighteen months.

OBITUARY.—During the early part of this year intelligence reached us of the death of (probably) the last surviving member of the early Mission of the London Missionary Society in Madagascar, the Rev. Edward Baker, formerly mission printer in Antananarivo. Mr. Baker was born at Burton in Staffordshire in 1804, and therefore had reached the good old age of fourscore years. He was appointed to Madagascar as a printer in 1828, and reached the Capital in the autumn of that year. He took a

warm interest in the spiritual work of the Mission, as well as in his own special department of work, and laboured here for four years, at the expiration of which time he went to England, but returned here again within two years' time. Mr. Baker was, with the Rev. D. Johns, the last of the missionary party to leave the island, in 1836, when the increasing severity of the persecution of the native Christians made it impossible for missionaries to continue longer in the country. For a few years after Mr. Baker's departure from Madagascar he resided at Mauritius, and during his residence there he prepared a useful little manual of Malagasy grammar entitled: *An Outline of a Grammar of the Malagasy Language as spoken by the Hovas*; 1845; pp. 84 (2nd ed., London: 1864).

Mr. Baker subsequently removed to South Australia, where he became the

pastor of two small congregations. His interest in Madagascar, however, did not cease, for, apparently anticipating the re-opening of the country, he prepared a large Dictionary of Malagasy, which was eventually purchased by the S.P.C.K. and, although never published, was used in the preparation of Mr. Richardson's new Dictionary. Upon the commencement of the Church Missionary Society's Mission on the east coast of this island in 1864, Mr. Baker (at the request, we believe, of Bishop Ryan) translated the English Prayer-book into Malagasy for the use of the Mission, thus showing, not only his continued interest in this country, but also his large-hearted catholicity. We have no exact intelligence of the date of his death, but he has left an honoured memory, as having "served his generation according to the will of God."

### LITERARY NOTES.

#### NEW BOOKS ON MADAGASCAR.

(1) *Madagascar and France. With some Account of the Island, its People, its Resources and Development.* By George A. Shaw, F.Z.S. Cr. 8vo; Rel. Tract Soc. London: 1885; pp. 320. Map and illustrations.

(2) *The True Story of the French Dispute in Madagascar.* By Captain S. Pasfield Oliver, late R.A. Demy 8vo; T. Fisher Unwin, London: 1885; pp. 280. Map.

(3) *Nos Droits sur Madagascar, et nos Grievs contre les Hovas, examinés impartialement par Ruben Sallens*, etc. Paris: 1885; pp. 163.

We include these three books in one notice because they have much the same object in view, namely, to give accurate information upon the still pending dispute between Madagascar and France.

Mr. Shaw's book, as its title would lead one to suppose, is largely

taken up with political matters; and chapters v.-xi., which form the bulk of the volume, describe very clearly the chief stages in the disputes which have led to the present war. The first four and the last three chapters, however, give a well condensed summary of what is known about Madagascar generally, the civilization and origin of the people, attempts to colonize the island, present advance of the Malagasy, and the flora, fauna, and meteorology of the country. While we can hardly endorse what has been said by some English reviewers as to Mr. Shaw's book being "the most complete account of Madagascar which has appeared for some years," we can heartily recommend it as giving, in a brief form, accurate information upon the points we have just enumerated. Many interesting topics connected with Madagascar and the Malagasy

are necessarily left quite untouched, the principal subject of the book demanding the bulk of the space.

Captain Oliver's book is written purely and simply to give the history of the Franco-Malagasy dispute, and to urge a peaceful settlement by concessions on the part of France. The book naturally goes over much the same ground as that occupied by the seven central chapters of Mr. Shaw's work, but the treatment is somewhat more racy and vigorous, as may be gathered from the titles of the eight chapters, which run thus: "(1) A Firebrand [M. Baudais]. (2) Materials for Incendiarism. (3) Conflagration. (4) Tormentum Belli. (5) Neutral Sentiments. (6) Regina Dei gratia. (7) Operations Civil and Military. (8) Blockade." Captain Oliver has added to the value of his book as a work of reference by giving the texts of the different French treaties made, it is said, with various Sâkalava chiefs forty years and more ago, and upon which the present unrighteous demands for a protectorate over the whole island are largely based.

M. Saillens's book is that of a Frenchman, and we are thankful to see that at least one French writer has had the courage and fairness to examine impartially the points in dispute between his own Government and that of Madagascar. Although M. Saillens thinks that his countrymen have some fair grounds of complaint against the Malagasy authorities in the matter of obstructions placed in the way of leasing of land to foreigners (and on this point we agree with him), he is practically at one with Mr. Shaw and Captain Oliver in condemning the recent demands of the French Government as perfectly unwarranted, and as utterly inconsistent with their action for many years past. This book, written from the French side, is, in almost every particular, in accordance with the arguments put forward by the Malagasy Ambassadors in their statements addressed to Lord Granville

(see Blue-book, *Correspondence respecting... the Visit of the Hova Envoys to Europe*; 1883; pp. 25-29).

No impartial reader can, we think, read these three books, or any one of them, without being convinced of the gross injustice of the present demands of France. Should they still be enforced, it will be clear to all that they afford another instance of how 'might' is considered by European nations as 'right,' when they come into collision with weaker and less civilized (?) peoples.

(4) *Madagascar: its History and People*. By the Rev. Henry W. Little (some years Missionary in East Madagascar). With a Map. Wm. Blackwood and Sons, Edinburgh and London: 1884; 8vo, pp. 356.

We just noticed in the last issue of the ANNUAL that this book was announced, and we now are able to give a fuller notice of it. Mr. Little's work is a clear, well-printed, and pleasantly written book, and to those who knew nothing of Madagascar before will give a good deal of information. But we are bound to add that there is hardly anything original in it except the chapter on the voyage out, and a few pages in chapters vi., vii., xi., and xiii.; and that one will look in vain for any new facts on the scientific aspects of the country, or with regard to the folk-lore, language, or manners and customs of the people. We should give the author no blame for this, however, if it was fairly acknowledged that his book only professed to be a compilation. It is true that in the preface Mr. Little says that the works of Mr. Sibree and others have been frequently consulted, but the fact is that large portions are *copied*, sometimes almost word for word, and sometimes with only the slightest verbal alterations, from the works of other writers. Want of space alone prevents us giving details of these plagiarisms. We are surprised that a gentleman who has been "some years missionary in East Madagascar" should not have been able to contri-



bute much new and interesting information about the coast tribes amongst whom he has lived. Had such been carefully noted, Mr. Little's book would have had a permanent value; as it is, it contains hardly anything of interest which has not been recorded by previous writers.

(5) *Histoire de Madagascar : ses habitants et ses missionnaires, par le Père de la Vaissière.* 2 vols., Paris : 1884.

This large work contains little of value about Madagascar generally, being chiefly occupied with a history of the Roman Catholic Mission in this island, together with a good deal of abuse of Protestant missionaries, especially those special bugbears of the French, the missionaries of the L. M. S.

(6) *Ny Ohabolan' ny Ntaolo : nangingonina sy nalahatry W. E. Cousins sy J. Parrett ary ny sakaizany sasany.* (*The Proverbs of the Ancients : collected and arranged by W. E. Cousins and J. Parrett and some of their friends.*) L. M. S. Press, Antananarivo : 1885 ; pp. 154.

Fourteen years ago Messrs. W. E. Cousins and J. Parrett published a little book of 76 pages containing 1477 native proverbs. This has been valued by all students of Malagasy, as it is well known that the native proverbs not only throw much light upon the habits of thought, customs, superstitions, etc., of the people, but that these products of the native mind are invaluable as presenting examples of terse and idiomatic Malagasy, as they embody genuine native speech unaffected by foreign influence. The first edition of these proverbs has, however, been for some time out of print, so the compilers have prepared a second edition, under the above title, giving a very much larger collection of proverbs (3790 in number) and arranged in alphabetical order, according to the first word in each.

(7) REPRINT of the ANNUAL. *The Antananarivo Annual and Madagascar Magazine. A Reprint of the*

*First Four Numbers. Revised and re-edited by Revs. J. Sibree, R. Baron, Missionaries of L. M. S.* L. M. S. Press, Antananarivo : 1885 ; 8vo. pp. 541.

It does not become editors to criticize their own work, but we perhaps quote the following from preface of this Reprint :—

"For some time past the numbers of the ANNUAL have been out of print and have been difficult to obtain ; and since frequent editions have been made for them by those who have only had the later numbers and who wish to complete their sets it has been thought well to reprint the first four numbers in one volume. Opportunity has therefore been taken to correct many mistakes which have been detected, to give numerous additional notes, to supply the scientific names of plants and animals, as they are known, and generally to bring up the papers here reprinted to the present state of our knowledge of the country.

"It is believed that this volume will be found to contain a large amount of original facts and information about Madagascar and its inhabitants, and to give in a readable form much which cannot be found in any other book yet published upon the country and the people.

(8) *A Madagascar Bibliography. In two Parts : Part I. arranged Alphabetically according to the Authors' Names ; Part II. arranged Chronologically according to the subjects treated of. To which is added A List of Publications in the Malagasy Language, and A List of Maps of Madagascar. Collected and arranged by the Rev. J. S. F.R.G.S., etc.* L. M. S. Press, Antananarivo : 1885 ; 8vo, pp. 92.

This is an octavo pamphlet of 92 pages, containing : (1) an alphabetically arranged List of Writers, with the titles of their books, pamphlets or articles, on all subjects relating in any way to this island ; this occupies 45 pages ; (2) a classified List of Subjects, the works

each of the twelve subdivisions (e.g., Madagascar Generally; Political History, etc.; Voyages, etc., etc.); (3) a List of Books and other Publications in the Malagasy Language; this occupies 29 pages; (4) and finally, a List of Maps of Madagascar, occupying nearly 3 pages, closely printed in double columns. The bare enumeration of the contents of the book is sufficient to fill with surprise even those who are to some extent familiar with Madagascar, and an examination of the book itself increases this feeling. Though this island is considered to have been comparatively neglected and unexplored, this Bibliography shows at a glance that it has received no small amount of attention.

The later portion of the Bibliography, viz. that giving a list of the books in the native language that have been issued, chiefly by the seven Presses of Antananarivo, gives a full and well-arranged conspectus of what has been written and published by foreigners to promote the Christianization and civilization of the people. Literature in this country is but in its infancy; but the fact that 29 pages 8vo are required simply to contain the titles of the books published shows that much activity has been displayed. Most of the books are naturally school books or religious manuals of different classes; but science, music, and journalism are also represented. Though a Bibliography is not expected to afford light reading, those interested in Madagascar will not find this volume wanting in instructive, and even entertaining, material (see, for example, the title of Richard Boothby's book, pp. 43, 44); and to any one wishing to study a particular question this book will prove a reliable and valuable guide. The hearty thanks of all interested in the literature of Madagascar are due to Mr. Sibree for the labour he has spent in compiling such full and exact

catalogues. It is perhaps not too much to say that we know of no one else who could have done for us what Mr. Sibree has done.—W.E.C.

(9) From the article on "Robert Drury's Madagascar," page 17 *ante*, we see that Captain Oliver has also been compiling a *Bibliography of Madagascar*. This we believe was done for a Government department.

PAPERS AND PAMPHLETS ON MADAGASCAR.—In the Proceedings of the French Académie de Sciences for this year (paper read March 23rd) is an article entitled: "Supplementary Remarks on the Gigantic Turtles of Madagascar;" by M. L. Vaillaint. "From the remains found by M. Grandidier at Etseré and Ambulitsate (*sic*), the author determines two distinct species, which he names *Tes-tudo Grandidieri* and *T. abrupta*." In the same publication (paper read March 16th) is an article on "The Channels and Lagoons of the East Coast of Madagascar," by M. A. Grandidier. And in the same publication (paper read April 13th) is an article "On a remarkable duration of the Trajectory of a Cyclone observed last February on the north-east coast of Madagascar," by M. Pélagaud. The writer remarks that "almost for the first time since the Indian Ocean has been visited by Europeans,—that is, the last four hundred years—a cyclone has visited the island of Madagascar, causing great damage to the French fleet and shipping along the north-east coast." This is certainly incorrect. In our own experience, now dating back more than twenty-two years, the east coast has been several times visited by cyclones, notably by a very destructive one on Feb. 20th, 1876, which reached the interior; see ANNUAL No. II., p. 120.

In botanical studies Mr. Baker, F.R.S., of Kew, has given a further instalment of his valuable papers, one of which, entitled "Further Contributions to the Flora of Central Ma-

\* The titles of this and the three following papers are, of course, translations of the original French titles, which we are unable to give, as the source of our information (*Nature*) gives them only in English.

Madagascar; Part I. Polypetalæ," appears in the *Journal of the Linnean Society—Botany*, Dec. 12th, 1884; vol. xxi. no. 135, pp. 317-353. In the same *Journal* (vol. xxi. no. 137, pp. 407-455) Mr. Baker gives the second and final part of this paper. In the same *Journal* (vol. xx. no. 129, pp. 329-338, Mr. H. N. Ridley, M.A., F.L.S., gives a paper on "New or rare Monocotyledonous Plants from Madagascar;" and in vol. xxi. no. 137, pp. 456-522, another paper on "The Orchids of Madagascar."

From Norway we have a considerable pamphlet of 126 pp. 8vo, by the Rev. Dr. Borchgrevink, entitled: *En kortfattet Oversigt over Madagascar, dets Folk og Mission*. This consists, we are told, of six lectures upon this country and its people and on mission work. In the German periodical *Mitteilungen der Geographischen Gesellschaft (für Thüringen) zu Jena*; 1885; b. iii. h. 4, pp. 252-258, is an account of a journey by one of the Norwegian missionaries formerly resident in this country, the Rev. M. Borgen, and entitled "Reisen norwegischer Missionare in Madagascar: - I. Borgens Reise durch das Sakalava gebiet von Morondava nach Midongy."

Among other recent articles or pamphlets by French writers, of which, however, we have not yet complete information, is one entitled: *Etude complète sur Madagascar* (Paris: 1885), by M. Eutrope; and two others, apparently with the same title, *Madagascar* (?) by M. Pauliat, and "Madagascar" (?) in *Annales de l'Extrême Orient et de l'Afrique*, July, 1885, by M. Charles Grémieux; and *Madagascar: la Reine des Iles Africaines*: 1885, by M. Charles Buet. There are doubtless many other papers on this country in French periodicals, as well as pamphlets, etc., arising from the attention now being paid to Madagascar in France. Besides M. Grandidier's paper mentioned above, he has written another on this country, in a number of the *Bulletin de la Soci-*

*été de Géographie de Paris*, and has given a fine map of Imérina. A new map of Madagascar by M. Grandidier is announced in a recent number of *Proc. Roy. Geog. Soc.* (June) as follows: "Carte de l'Ile de Madagascar, d'après les travaux de A. Grandidier. Paris: E. Andriveau-Goujon. Price 1s. 6d. (*Dulau*)." Another map of Madagascar is thus mentioned in *Proc. Roy. Geog. Soc.* (March.) "Geographical Society of Paris Dec. 5th, 1885. In the hall there was exhibited a large manuscript map of Madagascar, drawn by M. Laillet, an engineer and architect. This map, scale of 1: 666, 666, has been executed, as regards the northern coasts, on the basis of maps of French hydrography, while for the southern coast-line maps of English hydrography have been utilized. With regard to the interior of the island, M. Laillet has based his map on the works of the principal explorers, and made use in particular of the large map of the late English missionary, Dr. Mullens. The author himself, during 1885-6, made numerous surveys between Mananzary and Tamatave, and along the course of the Mangoro and its affluents."

In the last number of the *ANNUAL* we noticed the visit to the Capital of Lieut. Shufeldt, of the U. S. Navy. We learn from the *New York Graphic* that "since his return to this country [America] Lieut. Shufeldt has been employed on special service at the Navy Department, compiling for the press an account of his novel and hazardous journey."

WORKS IN MALAGASY. - *Ny Tantaran' ny Fiangonana* (Church History, from the Apostolic age to the 19th Century) by Rev. S. E. Jorgensen. Norwegian Mission, Antananarivo: 8vo, pp. 249. By the same author, *Ny Epistola. Hevi-teny hanampy ny Mpitory teny*. (The Epistles. Expositions for the help of Preachers) N.M.S. Press: 16mo, pp. 236. *Arkeologia Biblikaly* (Biblical Archaeology), by Rev. L. Dahle. N.M.S. Press: 12mo, pp. 158. *Fa-*

*norooan-dàlana ho any ny Kristiana* (Rules for the Christian Life; from Luther), by Rev. Nygaard. N.M.S. Press: 12mo, pp. 184. *Lektora fohifohy ny amy ny Fitondrana Sekoly* (Lectures on School Management), by Rev. J. Richardson and Mr. J. C. Thorne. L.M.S. Press: 12mo, pp. 45. *Tantaran' ny Jada sy ny Isirael* (History of the Kingdoms of Judah and Israel), by Mr. H. E. Clark. F.F.M.A. Press: 8vo, pp. 164. *Teofilo Anglikana* (Theophilus Anglicanus, 1st part), translated by Rev. G. H. Smith, M.A. S.P.G. Press: 8vo, pp. 70.

A 'Red-book' has been issued from the Queen's Press, entitled (when translated) "Report of the Negocia-

tions between the Malagasy Government and French Commissioners at Tamatave, through the friendly mediation of M. D. Maigrot, Consul of the King of Italy, June 13th—Aug. 17th, 1885;" folio, pp. 43. The documents, etc., are given in parallel columns, in French and Malagasy.

During the year another newspaper in the native language has been commenced, viz., a Malagasy edition of the *Madagascar Times*. The first number of this was published on Saturday, Aug. 22nd; Mr. A. Tacchi, editor; issued weekly. Mr. Tacchi has also published *Filazana ny Fomba Fandaharam-panjakana any England* (Account of Government Offices and Officials in England). 4to, pp. 38.

## VARIETIES.

### X CUSTOMS IN AFRICA AND NEW GUINEA SIMILAR TO THE 'TSO-DRANO.'

Among curious words and phrases used by the Malagasy is one which would soon be noticed by a new-comer, since the act which it is used to describe forms a part of every religious service. The 'benediction' pronounced before a congregation is dismissed is termed *tsò-dràno*, literally 'blowing water.' But how comes it that such a phrase is used for such an act? It arises from an old custom of taking a little water in the mouth and blowing it over or towards any one as a sign of blessing and favour; and so *tsò-drano* is used for *any* blessing, although no water, in any form, may accompany it. The idea involved in this symbolic act is not very clear, and it is now nearly, if not quite, obsolete, at least in the central province of Madagascar. The expression is now often used also as an equivalent for the foreign word *baptisa* (baptism). The following extract from *Nature* (Feb. 12th, 1885, p. 346) shows that there are somewhat parallel customs to be found amongst peoples both to the west and to the east of Madagascar:—

"One strange custom [amongst the Masai peoples of Eastern Central Africa] is that spitting is the greatest mark of distinction you can bestow upon a Masai, and Mr. Thompson was often sorely exercised when he desired to be particularly conciliating and gracious in his intentions. This custom is, however, not without parallel: the natives of part of the southern coast of New Guinea, indeed, improve upon it by squirting mouthfuls of water on those to whom they wish to give a specially friendly welcome. What is the particular significance of the custom, perhaps those who have investigated the subject of salutations may be able to explain."

Review of *Through Masai Land*: by Joseph Thompson, in *Nature*.

## THE 'VATOLAHY.'

While staying in Edinburgh for a day or two in Oct. 1882, at the house of an eminent scholar, a well-known professor of Oriental languages, I was asked by him if we had in Madagascar any traces of *phallus* worship (the reproductive principle in nature), which is, as is well known, a marked feature of Hindu idolatry up to the present day (the *linga*), and was also prominent in many of the old-world idolatries. I answered at first in the negative; but on thinking over the matter afterwards, it occurred to me that possibly the *vatolahy*, or memorial stones (lit. 'male stones'), so commonly seen in the central provinces of the island might be relics of such worship. In Imèrina these are usually rough undressed blocks or slabs of blue granite from eight to fourteen feet high; while in Bètsilèo they are often of white granite smoothly finished, sometimes forming a massive circular pillar, and often ornamented with the peculiar Betsileo carving. The name and the form of these memorial stones seem to suggest some such connection. Can any one supply other facts which would throw any light upon this question?—ED. (J.S.)

## 'VOLOM-PARASY.'

In a paper by the Rev. S. E. Jorgensen in the ANNUAL for 1884, on "New Words in the Malagasy Language," he says: "We should have expected to have seen *violèta* on the list of introduced words, but Malagasy ingenuity has made this word superfluous. They have intended to say that dark violet is just the same colour as that of fleas! and so they call it *volom-parasy* (fleas' colour)." It seems more probable that the word *volom-parasy* is a translation of the French word *puce*, dark violet, *la puce*, the flea. And the distinguished author of the idea of a similarity between dark violet and fleas' colour is said to be Louis, King of France, who, in a joke, dubbed a dark violet '*la puce*.' The word then travelled to England, where 'puce' is now a common name for dark violet.—S. M. WILLS.

## X RAINFALL OF ANTANANARIVO FOR THE YEAR 1885.

Month.	No. of days rain fell.	Quantity.	Average fall of last four years.
January....	25 days	16·91 in.	13·56 inches
February ..	15 "	14·10 "	7·73 "
March ....	14 "	2·47 "	8·53 "
April .....	4 "	1·22 "	1·41 "
May .....	3 "	·35 "	0·90 "
June .....	4 "	·30 "	0·11 "
July .....	0 "	·00 "	0·075 "
August ....	4 "	·42 "	0·32 "
September..	7 "	2·05 "	0·405 "
October....	5 "	1·06 "	4·70 "
November..	14 "	5·16 "	5·735 "
December..	13 "	8·15 "	9·38 "
Total....	108 days	52·19 in.	52·805 inches

ED. (J.S.)

100

100

100

100

100

100

100

100



THE  
ANTANANARIVO  
ANNUAL

AND  
MADAGASCAR MAGAZINE.

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No. X.—CHRISTMAS, 1886.

(PART II. OF VOL. III.)

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*Charles G. Brown,  
Sault Ste. Marie, Michigan.*

THE  
ANTANANARIVO ANNUAL  
AND  
MADAGASCAR MAGAZINE.

RECORD OF INFORMATION ON THE TOPOGRAPHY AND NATURAL PRODUCTIONS  
OF MADAGASCAR, AND THE CUSTOMS, TRADITIONS, LANGUAGE,  
AND RELIGIOUS BELIEFS OF ITS PEOPLE.



EDITED BY THE  
REV. J. SIBREE, F.R.G.S.,  
AND  
REV. R. BARON, F.L.S.,  
*Missionaries of the L.M.S.*



No. X.—CHRISTMAS, 1886.  
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DIAGRAMS OF THE 'FANORONA' GAME.

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*\*.\* The Editors do not hold themselves responsible for every opinion expressed by those who contribute to the pages of the ANNUAL, but only for the general character of the articles as a whole.*

THE  
ANTANANARIVO ANNUAL  
AND  
MADAGASCAR MAGAZINE.

---

THE FAUNA OF MADAGASCAR AND THE  
MASCARENE ISLANDS.

[THE following paper, which forms Chapter xi. vol. I., of the valuable work entitled *The Geographical Distribution of Animals*, by the eminent naturalist, Mr. Alfred Russel Wallace, is here reproduced by the kind permission of the Author and his publishers, Messrs. Macmillan. A few extracts from other portions of that work, bearing on the fauna of Madagascar and the neighbouring islands, have also been added, in some cases in a foot-note, but in others in an Appendix; and the Editors of the ANNUAL have much pleasure in here acknowledging Mr. Wallace's ready compliance with their request to be allowed to reprint this interesting paper. The only alterations made are by the addition of a note in one or two places shewing, from *Island Life*, chap. xix., Mr. Wallace's later views on certain points.—EDS.]

THIS insular sub-region\* is one of the most remarkable zoological districts on the globe, bearing a similar relation to Africa as the Antilles to Tropical America, or New Zealand to Australia, but possessing a much richer fauna than either of these, and in some respects a more remarkable one even than New Zealand. It comprises, besides Madagascar, the islands of Mauritius, Bourbon and Rodriguez, the Seychelles and Comoro Islands. Madagascar itself is an island of the first class, being [nearly] a thousand miles long, and about 250

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\* It must be remembered that the whole surface of the globe is divided by Mr. Wallace into six zoological 'regions,' in each of which broad and clearly marked distinctions are shewn to exist in the animal life as compared with that of the other great divisions. Each of these regions is again divided into 'sub-regions,' Madagascar and the neighbouring islands forming the 'Malagasy Sub-region' of the 'Ethiopian Region,' a zoological division which includes Africa south of the Tropic of Cancer, together with its islands, excepting the Cape De Verde group.—EDS.

miles in average width. It lies parallel to the coast of Africa, near the southern Tropic, and is separated by 230 miles of sea from the nearest part of the continent, although a bank of soundings projecting from its western coast reduces this distance to about 160 miles. Madagascar is a mountainous island, and the greater part of the interior consists of open elevated plateaus; but between these and the coast there intervene broad belts of luxuriant tropical forests. It is this forest-district that has yielded most of those remarkable types of animal life which we shall have to enumerate; and it is probable that many more remain to be discovered. As all the main features of this sub-region are developed in Madagascar, we shall first endeavour to give a complete outline of the fauna of that country; and afterwards shew how far the surrounding islands partake of its peculiarities.

**MAMMALIA.**—The fauna of Madagascar is tolerably rich in genera and species of Mammalia, although these belong to a very limited number of families and orders. It is especially characterized by its abundance of Lemuridæ and Insectivora; it also possesses a few peculiar Carnivora of small size; but most of the other groups in which Africa is especially rich—apes and monkeys, lions, leopards and hyænas, zebras, giraffes, antelopes, elephants and rhinoceroses, and even porcupines and squirrels, are wholly wanting. No less than 40 distinct families of land mammals are represented on the continent of Africa, only 11 of which occur in Madagascar, which also possesses 3 families peculiar to itself. The following is a list of all the genera of Mammalia as yet known to inhabit the island:—

PRIMATES.			
<i>Lemuridæ.</i>			
<i>Indrisinæ.</i>	<i>Species.</i>		
*Indris .....	6		
<i>Lemurinæ.</i>			
*Lemur .....	15		
*Hapalemur .....	2		
*Microcebus .....	4		
*Chirogaleus .....	5		
*Lepilemur .....	2		
<i>Chiromyidæ.</i>			
*Chiromys .....	1		
BATS (Chiroptera).			
<i>Pteropidæ.</i>			
Pteropus .....	2		
<i>Rhinolophidæ.</i>			
Rhinolophus .....	1		
		<i>Vespertilionidæ.</i>	
		Vespertilio .....	1
		Taphozous .....	1
		<i>Noctilionidæ.</i>	
		Nyctinomus .....	1
		INSECTIVORA.	
		<i>Centetidæ.</i>	<i>Species.</i>
		*Centetes .....	2
		*Hemicentetes .....	2
		*Ericulus .....	2
		*Oryzorictes .....	1
		*Echinops .....	3
		<i>Soricidæ.</i>	
		Sorex .....	1
		CARNIVORA.	
		<i>Cryptoproctidæ.</i>	
		*Cryptoprocta .....	1

<i>Viverridae.</i>		RODENTIA.	
*Fossa .....	2	<i>Muridae.</i>	
*Galidia .....	3	*Nesomys .....	1
*Galidictis .....	2	*Hypogeomys .....	1
*Eupleres .....	1	*Brachytarsomys .....	1
UNGULATA.			
<i>Suidæ.</i>			
Potamochærus .....	1		

We have here a total of 12 families, 27 genera, and 65 species of Mammals; 3 of the families and 20 of the genera (indicated by asterisks) being peculiar. All the species are peculiar, except perhaps one or two of the wandering bats. Remains of a *Hippopotamus* have been found in a sub-fossil condition, showing that this animal probably inhabited the island at a not very remote epoch.

The assemblage of animals above noted is remarkable, and seems to indicate a very ancient connection with the southern portion of Africa, before the apes, ungulates and felines had entered it. The lemurs, which are here so largely developed, are represented by a single group in Africa, with two peculiar forms on the west coast. They also re-appear under peculiar and isolated forms in Southern India and Malaya, and are evidently but the remains of a once wide-spread group, since in Eocene times they inhabited North America and Europe, and very probably the whole northern hemisphere.\* The Insectivora are another group of high antiquity, widely scattered over the globe under a number of peculiar forms; but in no equally limited area represented by so many peculiar types as in Madagascar. South and West Africa are also rich in this order.

The Carnivora of Madagascar are mostly peculiar forms of Viverridæ, or civets, a family now almost confined to the Ethiopian and Oriental regions, but which was abundant in Europe during the Miocene period.

The *Potamochærus* is a peculiar *species* only, which may be perhaps explained by the unusual swimming powers of swine, and the semi-aquatic habits of this genus, leading to an immigration at a later period than in the case of the other Mammalia. The same remark will apply to the small *Hippopotamus*, which was coeval with the great struthious bird *Epyornis*.

\* "EOCENE PERIOD. *Primates*. The only undoubted Eocene examples of this order are the *Cænopithecus lemuroides* from the Jura, which has points of resemblance to the S. Amer. marmosets and howlers, and also to the Lemuridæ; and a cranium recently discovered in the department of Lot (S. W. France) undoubtedly belonging to the Lemuridæ, and which most resembles that of the West African 'Potto' (*Perodicticus*). This discovery has led to another, for it is now believed that remains formerly referred to the Anoplotheridæ (*Adapis* and *Ankelotherium* from the Upper Eocene of Paris) were also Lemurs" (pp. 124, 125).



Rodents are only represented by three peculiar forms of Muridæ, but it is probable that others remain to be discovered.

BIRDS.—Madagascar is exceedingly rich in birds, and especially in remarkable forms of Passeres. No less than 88 genera and 111 species of land-birds have been discovered, and every year some additions are being made to the list.\* The African families of Passeres are almost all represented, only two being absent—Paridæ and Fringillidæ, both very poorly represented in Africa itself. Among the Picariæ, however, the case is very different, no less than 7 families being absent, viz.—Picidæ, or woodpeckers; Indicatoridæ, or honey-guides; Megalæmidæ, or barbets; Musophagidæ, or plantain-eaters; Coliidæ, or colies; Bucerotidæ, or hornbills; and Irrisoridæ, or mockers. Three of these are peculiar to Africa, and all are well represented there, so that their absence from Madagascar is a very remarkable fact. The number of peculiar genera in Madagascar constitutes one of the main features of its ornithology, and many of these are so isolated that it is very difficult to classify them, and they remain to this day a puzzle to ornithologists. In order to exhibit clearly the striking characteristics of the bird-fauna of this island, we shall first give a list of all the peculiar genera; another, of the genera of which the species only are peculiar; and, lastly, a list of the species which Madagascar possesses in common with the African continent.

GENERA OF BIRDS PECULIAR TO MADAGASCAR, OR FOUND ELSEWHERE ONLY IN THE MASCARENE ISLANDS.

<i>Sylviidæ.</i>	<i>Species.</i>	<i>Laniidæ.</i>	<i>Species.</i>	<i>Coraciadæ.</i>	<i>Species.</i>
1. Bernieria ...	2	14. Calicalicus(?)	1	26. Atelornis ..	2
2. Ellisia .....	1	15. Vanga ....	4	27. Brachyptera-	
3. Mystacornis..	1	<i>Nectariniidæ.</i>		cias ....	1
4. Eroessa ....	1	16. Neodrepanis.	1	28. Geobiastes..	1
5. Gervasia ....	1	<i>Hirundinidæ.</i>		<i>Psittacidæ.</i>	
<i>Tymaliidæ.</i>		17. Phedina ....	1	29. Coracopsis..	2
6. Oxylabes ....	2	<i>Ploceidæ.</i>		<i>Columbidæ.</i>	
<i>Cinclidæ</i> (?).		18. Nelicurvius..	1	30. Alec-trenas¶	1
7. Mesites ....	1	<i>Sturnidæ.</i>		<i>Tetraonidæ.</i>	
<i>Sittidæ.</i>		19. Euryceros (?).	1	31. Margaroper-	
8. Hyperphes¶.	1	20. Hartlaubia ..	1	dix¶ ....	1
<i>Pycnonotidæ</i> (?).		21. Falculia ..	1	<i>Falconidæ.</i>	
9. Tylas .....	1	<i>Paictidæ.</i>		32. Nisoides ...	1
<i>Oriolidæ.</i>		22. Philepitta ..	1	33. Eutriorchis..	1
10. Artamia ....	3	<i>Cuculidæ.</i>		Total species of	
11. Cyanolanius.	1	23. Coua .....	9	peculiar genera	50
<i>Muscicapidæ.</i>		24. Cochlo-thraustes	1	<i>Æpyornithidæ.</i>	
12. Newtonia ..	1	<i>Leptosomidæ.</i>		34. Æpyornis ..	1
13. Pseudobias..	1	25. Leptosomus..	1		

\* The land-birds now known to inhabit Madagascar number at least 210 species, belonging to 148 genera.—EDS.

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ETHIOPIAN OR ORIENTAL GENERA WHICH ARE REPRESENTED IN  
MADAGASCAR BY PECULIAR SPECIES.

<i>Turdidæ.</i>	<i>Species.</i>		<i>Species.</i>	<i>Falconidæ.</i>	<i>Species.</i>
1. Bessonornis..	I	18. Centropus ..	I	35. Polyboroides.	I
<i>Sylviidæ.</i>		19. Cuculus ...	I	36. Circus .....	I
2. Acrocephalus	I	<i>Coraciadæ.</i>		37. Astur ...	3
3. Copsychus(Or.)¶	I	20. Eurystomus..	I	38. Accipiter...	I
4. Pratincola ..	I	<i>Alcedinidæ.</i>		39. Buteo ....	I
<i>Pycnonotidæ</i>		21. Corythornis..	I	40. Haliaëtus ..	I
5. Hypsipetes(Or.)¶	I	22. Inspidina...	I	41. Pernis .....	I
6. Andropadus..	I	<i>Upupidæ.</i>		42. Baza .....	I
<i>Campephagidæ.</i>		23. Upupa (?)..	I	43. Cerchneis....	I
7. Campephaga.	I	<i>Caprimulgidæ.</i>		<i>Strigidæ.</i>	
<i>Dicruridæ.</i>		24. Caprimulgus.	I	44. Athene .....	I
8. Dicrurus ....	I	<i>Cypselidæ.</i>		45. Scops .....	I
<i>Muscicapidæ.</i>		25. Cypselus ...	2	<i>Rallidæ.</i>	
9. Tchitrea ....	I	26. Chætura ....	I	46. Rallus .....	3
<i>Laniidæ.</i>		<i>Psittacidæ.</i>		47. Porzana ....	I
10. Laniarius....	I	27. Poliopsitta ..	I	<i>Scolopacidæ.</i>	
<i>Nectariniidæ.</i>		<i>Columbidæ.</i>		48. Gallinago....	I
11. Nectarinia ..	I	28. Treron ....	I	<i>Plataleidæ.</i>	
<i>Ploceidæ.</i>		29. Columba ....	I	49. Ibis .....	I
12. Foudia .....	2	30. Turtur .....	I	<i>Podicipidæ.</i>	
13. Hypargos ...	I	<i>Pteroclidæ.</i>		50. Podiceps ....	I
14. Spermostes ..	I	31. Pterocles....	I	Total peculiar spe-	} 56
<i>Alaudidæ.</i>		<i>Tetraonidæ.</i>		cies of Eth. or	
15. Mirafra.....	I	32. Francolinus..	I	Or. genera	
<i>Motacillidæ.</i>		<i>Phasianidæ.</i>			
16. Motacilla....	I	33. Numida ....	I		
<i>Cuculidæ.</i>		<i>Turnicidæ.</i>			
17. Ceuthmochares	I	34. Turnix .....	I		

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## SPECIES OF BIRDS COMMON TO MADAGASCAR AND AFRICA OR ASIA.

1. Cisticola cursitans.	5. Collocalia fuciphaga.	9. Falco concolor.
2. Corvus scapulatus.	6. Cœna capensis.	10. Milvus ægyptius.
3. Crithagra canicollis.	7. Aplopelia tympanistria.	11. Milvus migrans.
4. Meropssuperciliosus.	8. Falco minor.	12. Strix flammea.

These three tables show us an amount of speciality hardly to be found in the birds of any other part of the globe. Out of 111 land-birds in Madagascar, only 12 are identical with species inhabiting the adjacent continents, and most of these belong to powerful-winged, or wide-ranging, forms, which probably now often pass from one country to the other. The peculiar species—49 land-birds and 7 waders, or aquatics—are mostly well-marked forms of African genera. There are, however, several genera (marked thus¶) which have Oriental or Palæarctic affinities, but not African, viz.—*Copsychus*, *Hypsipetes*, *Hyphæripes*, *Alectrenas* and *Margaroperdix*. These indicate a closer approximation to the Malay countries than now exists.

The table of 33 peculiar genera is of great interest. Most of these are well-marked forms, belonging to families which

are fully developed in Africa; though it is singular that not one of the exclusively African families is represented in any way in Madagascar. Others, however, are of remote, or altogether doubtful, affinities. *Sittidæ* is Oriental and Palæartic, but not Ethiopian. *Oxylabes* and *Mystacornis* are of doubtful affinities. *Artamia* and *Cyanolanius* still more so, and it is quite undecided what family they belong to. *Calicalicus* is almost equally obscure. *Neodrepanis*, one of the most recent discoveries, seems to connect the Nectariniidæ with the Pacific Drepanidiæ. *Euryceros* is a complete puzzle, having been placed with the hornbills, the starlings, or as a distinct family. *Falculia* is an exceedingly aberrant form of starling, long thought to be allied to *Irrisor*. *Philepitta*, forming a distinct family (Paicidæ), is most remarkable and isolated, perhaps with remote South American affinities. *Leptosoma* is another extraordinary form, connecting the cuckoos with the rollers. *Atelornis*, *Brachypteracias*, and *Geobiastes* are terrestrial rollers, with the form and colouring of *Pitta*. So many perfectly isolated and remarkable groups are certainly nowhere else to be found; and they fitly associate with the wonderful aye-aye (*Chiromys*), the insectivorous Centetidæ, and carnivorous *Cryptoprocta*, among the Mammalia. They speak to us plainly of enormous antiquity, of long-continued isolation, and not less plainly of a lost continent or continental island, in which so many, and various, and peculiarly organized creatures, could have been gradually developed in a connected fauna, of which we have here but the fragmentary remains.

PLATE VI.—ILLUSTRATING THE CHARACTERISTIC FEATURES OF THE ZOOLOGY OF MADAGASCAR.—The lemurs, which form the most prominent feature in the zoology of Madagascar, being comparatively well-known from the numerous specimens in our Zoological Gardens, and good figures of the Insectivorous genera not being available, we have represented the nocturnal and extraordinary aye-aye (*Chiromys madagascariensis*) to illustrate its peculiar, and probably very ancient, mammalian fauna; while the river-hogs in the distance (*Potamocheirus Edwardsii*), allied to African species, indicate a later immigration from the mainland than in the case of most of the other Mammalia. The peculiar birds being far less generally known, we have figured three of them. The largest is the *Euryceros prevosti*, here classed with the starlings, although its remarkable bill and other peculiarities render it probable that it should form a distinct family. Its colours are velvety black and rich brown, with the bill of a pearly grey. The bird beneath (*Vanga curvirostris*) is one of the peculiar Madagascar shrikes, whose

plumage, variegated with green-black and pure white, is very conspicuous; while that in the right-hand corner is the *Leptosoma discolor*, a bird which appears to be intermediate between such very distinct families as the cuckoos and the rollers, and is therefore considered to form a family by itself. It is coppery green above and nearly white beneath, with a black bill and red feet. The fan-shaped plant on the left is the Traveller's-tree (*Urania speciosa*), one of the peculiar forms of vegetation in this marvellous island.

REPTILES.—These present some very curious features, comparatively few of the African groups being represented, while there are a considerable number of Eastern, and even of American, forms. Beginning with the snakes, we find, in the enormous family of Colubridæ, none of the African types; but instead of them three genera—*Herpetodryas*, *Phylodryas*, and *Heterodon*—only found elsewhere in South and North America. The Psammophidæ, which are both African and Indian, are represented by a peculiar genus, *Mimophis*. The Dendrophidæ are represented by *Ahatulla*, a genus which is both African and American. The Dryophidæ, which inhabit all the tropics, but are most developed in the Oriental region, are represented by a peculiar genus, *Langaha*. The tropical Pythonidæ are represented by another peculiar genus, *Sanzinia*. The Lycodontidæ and Viperidæ, so well developed in Africa, are entirely absent.

The lizards are no less remarkable. The Zonuridæ, abundantly developed in Africa, are represented by one peculiar genus, *Cicigna*; the wide-spread Scincidæ by another peculiar genus, *Pygomeles*. The African Sepsidæ are represented by three genera, two of which are African, and one, *Amphiglossus*, peculiar. The Acontiadæ are represented by a species of the African genus *Acontias*. Of Scincidæ there is the wide-spread *Euprepes*. The Sepidæ are represented by the African genera *Seps* and *Scelotes*. The Geckotidæ are not represented by any purely African genera, but by *Phyllodactylus*, which is American and Australian; by *Hemidactylus*, which is spread over all the tropics; by two peculiar genera; and by *Uroplatis*, *Geckolepis* and *Phelsuma*, confined to Madagascar, Bourbon and the Andaman Islands. The Agamidæ, which are mostly Oriental, and are represented in Africa by the single genus *Agama*, have here three peculiar genera, *Tracheloptychus*, *Chalarodon* and *Hoplurus*. Lastly, the American Iguanidæ are said to be represented by a species of the South American genus *Oplurus*. The classification of Reptiles is in such an unsettled state that some of these determinations of affinities are probably erro-

neous; but it not likely that any corrections which may be required will materially affect the general bearing of the evidence, as indicating a remarkable amount of Oriental and American relationship.

The other groups are of less interest. Tortoises are represented by two African or wide-spread genera of Testudinidæ, *Testudo* and *Chersina*, and by one peculiar genus, *Pyxis*; and there are also two African genera of Chelydidæ.

The AMPHIBIA are not very well known. They appear to be confined to species of the wide-spread Ethiopian and Oriental genera—*Hylarana*, *Polypedates*, and *Rappia* (Polypedatidæ); and *Pyxicephalus* (Ranidæ).

FRESH-WATER FISHES.—These appear to be at present almost unknown. When carefully collected they will no doubt furnish some important facts.

THE MASCARENE ISLANDS.—The various islands which surround Madagascar—Bourbon, Mauritius, Rodriguez, the Seychelles, and the Comoro Islands—all partake in a considerable degree of its peculiar fauna, while having some special features of their own.

Indigenous Mammalia (except bats) are probably absent from all these islands (except the Comoros), although *Lemur* and *Centetes* are given as natives of Bourbon and Mauritius. They have, however, perhaps been introduced from Madagascar. *Lemur mayottensis*, a peculiar species, is found in the Comoro Islands, where a Madagascar species of *Viverra* also occurs.

Bourbon and Mauritius may be taken together, as they much resemble each other. They each possess species of a peculiar genus of Campephagidæ, or caterpillar shrikes, *Oxynotus*; while the remarkable *Fregilupus*, belonging to the starling family, inhabits Bourbon, if it is not now extinct. They also have peculiar species of *Pratincola*, *Hypsipetes*, *Phedina*, *Tchitrea*, *Zosterops*, *Foudia*, *Collocalia* and *Coracopsis*; while Mauritius has a very peculiar form of dove of the sub-genus *Trocaza*; an *Alectrenas*, extinct within the last thirty years; and a species of the Oriental genus of parroquets, *Palæornis*. The small and remote island of Rodriguez has another *Palæornis*, as well as a peculiar *Foudia*, and a *Drymæca* of apparently Indian affinity.

Coming to the Seychelle Islands, far to the north, we find the only mammal an Indian species of bat (*Pteropus Edwardsii*). Of the twelve land-birds all but one are peculiar species, but all belong to genera found also in Madagascar, except one—a peculiar species of *Palæornis*. This is an Oriental genus, but found also in the Mascarene Islands and on the African continent. A species of black parrot (*Coracopsis Barklayi*), and a

weaver-bird of peculiar type (*Foudia seychellarum*) show, however, a decided connection with Madagascar. There are also two peculiar pigeons - a short-winged *Turtur* and an *Alectrænas*.

Most of the birds of the Comoro Islands are Madagascar species, only two being African. Five are peculiar, belonging to the genera *Nectarinia*, *Zosterops*, *Dicrurus*, *Foudia* and *Alectrænas*.

Reptiles are scarce. There appear to be no snakes in Mauritius and Bourbon, though some African species are said to be found in the Seychelle Islands. Lizards are fairly represented. Mauritius has *Cryptoblepharus*, an Australian genus of Gymnophthalmidæ; *Hemidactylus* (a wide spread genus) and *Peropus* (Oriental and Australian)—both belonging to the Geckotidæ. Bourbon has *Heteropus*, a Moluccan and Australian genus of Scincidæ; *Phelsuma* (Geckotidæ) and *Chameleo*, both found also in Madagascar; as well as *Pyxis*, one of the tortoises. The Seychelles have *Theconyx*, a peculiar genus of Geckotidæ, and *Chameleo*. Gigantic land-tortoises, which formerly inhabited most of the Mascarene Islands, now only survive in Aldabra, a small island north-east of the Comoros. These will be noticed again further on. Amphibia seem only to be recorded from the Seychelles, where two genera of tree-frogs of the family Polypedatidæ are found; one (*Megalixalus*), peculiar, the other (*Rappia*) found also in Madagascar and Africa.

The few insect groups peculiar to these islands will be noted when we deal with the entomology of Madagascar.

EXTINCT FAUNA OF THE MASCARENE ISLANDS AND MADAGASCAR.—Before quitting the vertebrate groups, we must notice the remarkable birds which have become extinct in these islands little more than a century ago. The most celebrated is the Dodo of Mauritius (*Didus ineptus*), but an allied genus, *Pezophaps*, inhabited Rodriguez; and of both of these almost perfect skeletons have been recovered. Other species probably existed at Bourbon. Remains of two genera of flightless rails have also been found, *Aphanapteryx* [in Mauritius], and *Erythromachus* [in Rodriguez]; and even a heron (*Ardea megacephala*), which was short-winged and seldom flew; while in Madagascar there lived a gigantic struthious bird, the *Aepyornis*. The bearing of these extinct forms on the past history of the region will be adverted to in the latter part of this chapter.\*

\* "A large parrot, said by Prof. Milne-Edwards to be allied to *Ara* and *Microglossus*, also inhabited Mauritius; and another, allied to *Eclectus*, the island of Rodriguez. None of these have been found in Madagascar; but the gigantic *Aepyornis*, forming a peculiar family distinct both from the ostriches of Africa and the *Dinornis* of New Zealand, inhabited that island; and there is reason to believe that this may have lived less than 200 years ago" (p. 164).

Dr. Günther has recently distinguished five species of fossil tortoises from Mauritius and Rodriguez, all of them quite different from the living species of Aldabra.

INSECTS.—The butterflies of Madagascar are not so remarkable as some other orders of insects. There seems to be only one peculiar genus, *Heteropsis* (Satyridæ). The other genera are African, *Leptoneura* being confined to Madagascar and South Africa. There are some fine *Papilios* of uncommon forms. The most interesting lepidopterous insect, however, is the fine diurnal moth *Urania*, as all the other species of the genus inhabit Tropical America and the West Indian Islands.\*

The Coleoptera have been better collected, and exhibit some very remarkable affinities. There is but one peculiar genus of Cicindelidæ (*Pogonostoma*), which is allied to the South American genus *Ctenosoma*. Another genus, *Peridexia*, is common to Madagascar and South America. None of the important South African genera are represented, except *Eurymorpha*; while *Meglaomma* is common to Madagascar and the Oriental region.

Of the Carabidæ we have somewhat similar phenomena on a wider scale. Such large and important African genera as *Polyhirma* and *Anthia* are absent; but there are four genera in common with South Africa, and two with West Africa; while three others are as much Oriental as African. One genus, *Distrigus*, is wholly Oriental, and another, *Homalosoma*, Australian. *Colpodes*, well developed in Bourbon and Mauritius, is Oriental and South American. Of the peculiar genera, *Sphærostylis* has South American affinities; *Microchila*, Oriental; the others being related to widely distributed genera.

The Lucanidæ are few in number, and all have African affinities. Madagascar is very rich in Cetoniidæ and possesses 20 peculiar genera. *Bothrorhina*, and three other genera belonging to the *Ichnostoma* group, have wholly African relations. *Doryscelis* and *Chromoptila* are no less clearly allied to Oriental genera. A series of eight peculiar genera belong to the Schizorhinidæ, a family the bulk of which are Australian, while there are only a few African forms. The remaining genera appear to have African affinities, but few of the peculiarly African genera are represented. *Glyciphana* is characteristic of the Oriental region.

\* "The W. India Islands possess very few mammalia, all of small size and allied to those of America, except one genus, and that belongs to an order, Insectivora, entirely absent from S. America, and to a family, Centetidæ, all the other species of which inhabit Madagascar only. And as if to add force to this singular correspondence, we have one Madagascar species of a beautiful day-flying moth (*Urania*), all the other species of which inhabit Tropical America. These insects are gorgeously arrayed in green and gold, and are quite unlike any other Lepidoptera upon the globe" (p. 31).

The Buprestidæ of Madagascar consist mainly of one large and peculiar genus, *Polybothris*, allied to the almost cosmopolite *Psiloptera*. Most of the other genera are Ethiopian and Oriental; but *Polycesta* is mainly South American, and the remarkable and isolated genus *Sponsor* is confined to Mauritius, with a species in Celebes and New Guinea.

The Longicorns are numerous and interesting, there being no less than 24 peculiar genera. Two of the genera of Prionidæ are very isolated, while a third, *Closterus*, belongs to a group which is Malayan and American.

Of the Cerambycidæ, *Philematium* ranges to Africa and the West Indies; *Leptocera* is only found eastward in Ceylon and the New Hebrides; while *Euporus* is African. Of the peculiar genera, two are of African type; three belong to the *Leptura* group, which are mostly Palæarctic and Oriental, with a few in South Africa; while *Philocalocera* is allied to a South American genus.

Among the Lamiidæ there are several wide-ranging, and seven African, genera; but *Coptops* is Oriental, and the Oriental *Praonetha* occurs in the Comoro Islands. Among the peculiar genera, several have African affinities, but *Tropidema* belongs to a group which is Oriental and Australian; *Oopsis* is found also in the Pacific Islands; *Mythergates*, *Sulemus*, and *Coedomæa* are allied to Malayan and American genera.

GENERAL REMARKS ON THE INSECT-FAUNA OF MADAGASCAR.—Taking the insects as a whole, we find the remarkable result that their affinities are largely Oriental, Australian and South American; while the African element is represented chiefly by special South African or West African forms; rather than by such as are widely spread over the Ethiopian region.\* In some families as Cetoniidæ and Lamiidæ—the African element appears to preponderate; in others, as Cicindelidæ—the South American affinity seems strongest; in Carabidæ, perhaps the Oriental; while in Buprestidæ and Cerambycidæ the African and foreign elements seen nearly balanced. We must not impute too much importance to these foreign alliances among insects, because we find examples of them in every country on the globe. The reason they are so much more pronounced in Madagascar may be, that during long periods of time this island has served as a refuge for groups that have been dying out on the great continents; and that, owing to the numerous deficiencies of a somewhat similar kind in the series of vertebrates in Australia and South America, the same groups

\* There are also some special resemblances between the plants of Madagascar and South Africa, according to Dr. Kirk.



have often been able to maintain themselves in all these countries as well as in Madagascar. It must be remembered too, that the peculiarities in the Madagascar and Mascarene insect-fauna are but exaggerations of a like phenomenon on the mainland. Africa also has numerous affinities with South America, with the Malay countries, and with Australia; but they do not bear anything like so large a proportion to the whole fauna, and do not therefore attract so much attention. The special conditions of existence, and the long-continued isolation of Madagascar, will account for much of this difference; and it will evidently not be necessary to introduce, as some writers are disposed to do, a special land connection or near approach between Madagascar and all these countries, independently of Africa; except perhaps in the case of the Malay Islands, as will be discussed further on.

LAND-SHELLS.—Madagascar and the adjacent islands are all rich in land-shells. The genera of Helicidæ are *Vitrina*, *Helix*, *Achatina*, *Columna* (peculiar to Madagascar and West Africa), *Buliminus*, *Cionella* (chiefly Oriental and South American, but not African), *Pupa*, *Streptaxis*, and *Cuccinea*. Among the Operculata we have *Truncatella* (widely scattered, but not African); *Cyclotus* (South American, Oriental and South African); *Cyclophorus* (mostly Oriental, with a few South African); *Lep-topoma* (Oriental); *Megalomastoma* (Malayan and South American); *Lithidion* (peculiar to Madagascar, Socotra and South-west Arabia); *Otopoma* (with the same range, but extending to West India and New Ireland); *Cyclostoma* (widely spread, but not African); and *Omphalotropis* (wholly Oriental and Australian). We thus find the same general features reproduced in the land-shells as in the insects, and the same remarks will to a great extent apply to both. The classification of the former is, however, by no means satisfactory, and we have no extensive and accurate general catalogue of shells, like those of Lepidoptera and Coleoptera, which have furnished us with such valuable materials for the comparison of the several faunas.

ON THE PROBABLE PAST HISTORY OF THE ETHIOPIAN REGION.—Perhaps none of the great zoological regions of the earth present us with problems of greater difficulty or higher interest than the Ethiopian. We find in it the evidence of several distinct and successive faunas, now intermingled; and it is very difficult, with our present imperfect knowledge, to form an adequate conception of how and when the several changes occurred. There are, however, a few points which seem sufficiently clear, and these afford us a secure foundation in our endeavour to comprehend the rest.

Let us then consider what are the main facts we have to account for: 1. In Continental Africa, more especially in the south and west, we find, along with much that is peculiar, a number of genera shewing a decided Oriental, and others an equally strong South American, affinity; this latter more particularly shewing itself among reptiles and insects. 2. All over Africa, but more especially in the east, we have abundance of large ungulates and felines—antelopes, giraffes, buffaloes, elephants and rhinoceroses, with lions, leopards, and hyænas, all of types now or recently found in India and Western Asia. 3. But we have also to note the absence of a number of groups which abound in the above-named countries, such as deer, bears, moles, and true pigs; while camels and goats—characteristic of the desert regions just to the north of the Ethiopian—are equally wanting. 4. There is a wonderful unity of type and want of speciality in the vast area of our first sub-region, extending from Senegal across to the east coast, and southward to the Zambezi; while West Africa and South Africa each abound with peculiar types. 5. We have the extraordinary fauna of Madagascar to account for, with its evident main derivation from Africa, yet wanting all the larger and higher African forms; its resemblances to Malaya and to South America; and its wonderful assemblage of altogether peculiar types.

Here we find a secure starting-point, for we are sure that Madagascar must have been separated from Africa before the assemblage of large animals enumerated above had entered it. Now it is a suggestive fact, that all these belong to types which abounded in Europe and India about the Miocene period. It is also known, from the prevalence of Tertiary deposits over the Sahara and much of Arabia, Persia, and Northern India, that during early Tertiary times a continuous sea from the Bay of Bengal to the British Isles completely cut off all land communication between Central and South Africa on the one side, and the great continent of the Eastern hemisphere on the other. When Africa was thus isolated, its fauna probably had a character somewhat analogous to that of South America at the same period. Most of the higher types of mammalian life were absent, while lemurs, Edentates and Insectivora took their place. At this period Madagascar was no doubt united with Africa, and helped to form a great southern continent,\* which

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\* Mr. Wallace in his later work, *Island Life*, combats (we think quite conclusively) this hypothesis of a great southern continent, called 'Lemuria' by many writers, and shews that any land connection between Madagascar and India must have been by an archipelago of large islands. See pp. 394-399 and 417-423, and his maps of the Indian Ocean, at pp. 387 and 396. —EDS.

must at one time have extended eastward as far as Southern India and Ceylon; and over the whole of this the lemurine type no doubt prevailed.

During some portion of this period South Temperate Africa must have had a much greater extension, perhaps indicated by the numerous shoals and rocks to the south and east of the Cape of Good Hope, and by the Crozets and Kerguelen Islands further to the south-east. This would have afforded means for that intercommunion with Western Australia which is so clearly marked in the flora, and to some extent also, in the insects, of the two countries; and some such extension is absolutely required for the development of that wonderfully rich and peculiar temperate flora and fauna, which, now crowded into a narrow territory, is one of the greatest marvels of the organic world.

During this early period, when the great southern continents—South America, Africa and Australia—were equally free from the incursions of the destructive felines of the north, the Struthious or ostrich type of birds was probably developed into its existing forms. It is not at all necessary that these three continents were at any date united, in order to account for the distribution of these great terrestrial birds, as this may have arisen by at least two other easily conceivable modes. The ancestral Struthious type may, like the Marsupial, have once spread over the larger portion of the globe; but as higher forms, especially of Carnivora, became developed, it would be exterminated everywhere but in those regions where it was free from their attacks. In each of these it would develop into special forms adapted to surrounding conditions; and the large size, great strength, and excessive speed of the ostrich, may have been a comparatively late development caused by its exposure to the attacks of enemies, which rendered such modification necessary. This seems the most probable explanation of the distribution of Struthious birds, and it is rendered almost certain by the discovery of remains of this order in Europe in Eocene deposits, and by the occurrence of an ostrich among the fossils of the Siwalik hills; but it is just possible, also, that the ancestral type may have been a bird capable of flight, and that it spread from one of the three southern continents to the others at the period of their near approach, and more or less completely lost the power of flight, owing to the long continued absence of enemies.

During the period we have been considering, the ancestors of existing apes and monkeys flourished along the whole southern shores of the old Palæarctic continent; and it seems

likely that they first entered Africa by means of a land connection indicated by the extensive and lofty plateaus of the Sahara, situated to the south-east of Tunis and reaching to a little north-west of Lake Tchad; and at the same time the elephant and rhinoceros type may have entered. This will account for the curious similarity between the higher fauna of West Africa and the Indo-Malay sub-region; for, owing to the present distribution of land and sea, and the narrowing of the tropical zone since Miocene times, these are now the only lowland, equatorial, forest-clad countries which were in connection with the southern shores of the old Palæarctic continent at the time of its greatest luxuriance and development. This western connection did not probably last long, the junction that led to the greatest incursion of new forms, and the complete change in the character of the African fauna, having apparently been effected by way of Syria and the shores of the Red Sea at a somewhat later date. By this route the old south Palæarctic fauna, indicated by the fossils of Pikermi and the Siwalik hills, poured into Africa; and finding there a new and favourable country, almost wholly unoccupied by large Mammalia, increased to an enormous extent, developed into new forms, and finally overran the whole continent.

Before this occurred, however, a great change had taken place in the geography of Africa. It had gradually diminished on the south and east; Madagascar had been left isolated; while a number of small islands, banks, and coral reefs in the Indian Ocean alone remained to indicate the position of a once extensive equatorial land. The Mascarene Islands appear to represent the portion which separated earliest, before any Carnivora had reached the country; and it was in consequence of this total exemption from danger that several groups of birds altogether incapable of flight became developed here, culminating in the large and unwieldy Dodo, and the more active *Aphanapteryx*. To the same causes may be attributed the development in these islands of gigantic land-tortoises, far surpassing any others now living in the globe. They appear to have formerly inhabited Mauritius, Bourbon and Rodriguez, and perhaps other Indian Ocean groups, but having been recklessly destroyed, now only survive in the small uninhabited Aldabra islands north-east of the Comoros. The largest living specimen ( $5\frac{1}{2}$  feet long) is now in our Zoological Gardens.\* The only other place where equally large tortoises (of an allied species) are found, is the Galapagos Islands, where they were

\* See ANNUAL No. I., p. 122; *Reprint of Annual*, p. 128.

equally free from enemies until civilized man came upon the scene; who, partly by using them for food, partly by the introduction of pigs, which destroy the eggs, has greatly diminished their numbers and size, and will probably soon wholly exterminate them. It is a curious fact, ascertained by Dr. Günther, that the tortoises of the Galapagos are more nearly related to the extinct tortoises of Mauritius than is the living tortoise of Aldabra. This would imply that several distinct groups or sub-genera of *Testudo* have had a wide range over the globe, and that some of each have survived in very distant localities. This is rendered quite conceivable by the known antiquity of the genus *Testudo*, which dates back to at least the Eocene formation (in North America) with very little change of form. These sluggish reptiles, so long-lived and so tenacious of life, may have remained unchanged, while every higher animal type around them has become extinct and been replaced by very different forms; as in the case of the living *Emys tectum*, which is the sole survivor of the strange Siwalik fauna of the Miocene epoch. The ascertained history of the genus and the group thus affords a satisfactory explanation of the close affinity of the gigantic tortoises of Mauritius and the Galapagos.

X The great island of Madagascar seems to have remained longer united with Africa, till some of the smaller and more active Carnivora had reached it; and we consequently find there no wholly terrestrial form of bird but the gigantic and powerful *Aepyornis*, well able to defend itself against such enemies. As already intimated, we refer the South American element in Madagascar not to any special connection of the two countries independently of Africa, but to the preservation there of a number of forms, some derived from America through Africa, others of once almost cosmopolitan range, but which, owing to the severer competition, have become extinct on the African continent, while they have continued to exist under modified forms in the two other countries.

14 The depths of all the great oceans are now known to be so profound that we cannot conceive the elevation of their beds above the surface without some corresponding depression elsewhere. And if, as is probable, these opposite motions of the earth's crust usually take place in parallel bands, and are to some extent dependent on each other, an elevation of the sea-bed could hardly fail to lead to the submergence of large tracts of existing continents; and this is the more likely to occur on account of the great disproportion that we have seen exists between the mean height of the land and the mean depth

of the ocean. Keeping this principle in view, we may, with some probability, suggest the successive stages by which the Ethiopian region assumed its present form, and acquired the striking peculiarities that characterize its several sub-regions.

During the early period, when the rich and varied temperate flora of the Cape, and its hardly less peculiar forms of insects and of low-type Mammalia, were in process of development in an extensive south temperate land, we may be pretty sure that the whole of the east, and much of the north, of Africa was deep sea. At a later period, when this continent sank towards the south and east, the elevation may have occurred which connected Madagascar with Ceylon; and only at a still later epoch, when the Indian Ocean had again been formed, did central, eastern and northern Africa gradually rise above the ocean, and effect a conjunction with the great northern continent by way of Abyssinia and Arabia. And if this last change took place with tolerable rapidity, or if the elevatory force acted from the north, towards the south, there would be a new and unoccupied territory to be taken possession of by immigrants from the north, together with a few from the south and west. The more highly organized types from the great northern continent, however, would inevitably prevail; and we should thus have explained the curious uniformity in the fauna of so large an area, together with the absence from it of those peculiar Ethiopian types which so abundantly characterize the other sub-regions.

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Our knowledge of the <sup>X</sup>geology and palæontology of Africa being so scanty, it would be imprudent to attempt any more detailed explanation of the peculiarities of its existing fauna. The sketch now given is, it is believed, founded on a sufficient basis of facts to render it not only a possible but a probable account of what took place; and it is something gained to be able to show that a large portion of the peculiarities and anomalies of so remarkable a fauna as that of the Ethiopian region can be accounted for by a series of changes of physical geography during the Tertiary epoch, which can be hardly be considered extreme, or in any way unlikely to have occurred.

ALFRED R. WALLACE.

NOTE.—The contractions used in the table given overleaf stand for the six zoological 'regions' as proposed by Mr. Wallace, viz.: *Palæarctic*: all Europe, Africa north of the Sahara, and all Asia except India and the Indo-Chinese Peninsula; *Oriental*: India, the Indo-Chinese Peninsula, Sumatra, Java, Borneo, and the Philippines; *Australian*: Australia, New Guinea, Celebes, the Moluccas, and New Zealand; *Ethiopian*: Africa south of the Sahara, and its islands; *Nearctic*: North America and Greenland; and *Neotropical*: Central and South America.—EDS.

## APPENDIX.

## FAMILIES OF ANIMALS INHABITING THE MALAGASY SUB-REGION.

For Mammalia and birds see *ante* (pp. 130—133).

## REPTILIA.

- Ophidia.*  
 1. Typhlopidae ..... All but Nearctic.  
 7. Colubridæ ..... Almost Cosmop.  
 9. Psammophidæ ... Orient. and S. Palearc.  
 11. Dendrophidæ ... Or., Aust., Neotrop.  
 12. Dryophidæ ..... Or., Neotrop.  
 17. Pythonidæ ..... All Trop.  
 23. Hydrophidæ ..... Or., Aust., Panama.  
 25. Viperidæ ..... Or. Palearctic.  
*Lacertilia.*  
 34. Zonuridæ ..... All Amer., N. Ind., S. Europe.  
 41. Gymnophthalmidæ ..... Palearc., Aust.  
 42. Scincidæ ..... Alm. Cosmop.  
 47. Sepidæ ..... South Palearctic.  
 48. Acontiadæ ..... Ceylon and Moluc.  
 49. Geckotidæ ..... Alm. Cosmop.  
 51. Agamidæ ..... Or., Aust., S. Palearc.  
 52. Chameleontidæ ... Or., S. Palearc.  
*Crocodylia.*  
 55. Crocodylidæ ..... Or., Neotrop.  
*Chelonina.*  
 57. Testudinæ ..... All count. ex. Aust.  
 58. Chelydridæ ..... Aust., S. Amer.

## AMPHIBIA.

- Anoura.*  
 17. Polypedatidæ ... Cosmop.  
 18. Ranidæ ..... Alm. Cosmop.

## FISHES (FRESH WATER).

- Acanthopterygii.*  
 35. Labyrinthidæ ..... Aust., Neotrop.  
 38. Mugillidæ ..... Or., Moluc.  
 52. Chromidæ ..... Or., Neotrop.  
*Physostomi.*  
 59. Siluridæ ..... All Trop.  
 73. Cyprinodontidæ . Palearc., Or., Amer.  
 75. Cyprinidæ ..... Als. fr. Aust. & S. Am.

## INSECTS (LEPIDOPTERA).

- Diurni* (Butterflies).  
 1. Danaidæ ..... All W. coun. & Canad.  
 2. Satyridæ ..... Cosmop.  
 6. Acrodidæ ..... All Trop.  
 8. Nymphalidæ ..... Cosmop.  
 9. Lybythidæ ..... Als. fr. Aust. only.  
 10. Nemeobitidæ ..... " " and Nearct.  
 13. Lycænidæ ..... Cosmop.  
 14. Pieridæ ..... "  
 15. Papilionidæ ..... "  
 16. Hesperidæ ..... "  
*Sphingidea.*  
 17. Zygaenidæ ..... "  
 19. Agaristidæ ..... Aust., Or.  
 20. Uraniidæ ..... All Trop.  
 22. Egeriidæ ..... Cosmop. ex. Aust.  
 23. Sphingidæ ..... Cosmop.

(pp. 294—299.)

## SUB-ORDER (OF PRIMATES)—LEMUROIDEA.

Family 6—*Lemuridæ* (11 genera, 53 species).

Found in all sub-regions of Palearctic region; and in all but E. Africa of Ethiopian region. The Lemuridæ, comprehending all the animals usually termed Lemurs, and many of their allies also, are divided by Prof. Mivart—who has carefully studied the group—into four sub-families and eleven genera, as follows:—

*Sub-family Indrisinæ*, consisting of the genus *Indris* (5 sp.), is confined to Madagascar.

*Sub-family Lemurinæ*, contains five genera, viz.:—*Lemur* (15 sp.); *Haplemur* (2 sp.); *Microcebus* (4 sp.); *Chirogaleus* (5 sp.); and *Lepilemur* (2 sp.); all confined to Madagascar.

*Sub-family Nycticebinæ*, contains four genera, viz.:—*Nycticebus* (3 sp.)—small, short-tailed, nocturnal animals, called slow-lemurs—range from E. Bengal to S. China, and to Borneo and Java; *Loris* (1 sp.)—a very small tailless, nocturnal lemur, which inhabits Madras, Malabar and Ceylon; *Perodicticus* (1 sp.)—the Potto—a small lemur with almost rudimentary forefinger, found at Sierra Leone (pl. v., vol. i. p. 264); *Arctocebus* (1 sp.)—the Angwantibo another extraordinary form, in which the forefinger is quite absent, and the first toe armed with a long claw—inhabits Old Calabar.

*Sub-family Galaginæ*, contains only the genus *Galago* (14 sp.), which is confined to the African continent, ranging from Senegal and Fernando Po to Zanzibar and Natal.

Family 8.—*Chiromyidae* (1 genus, 1 species).

The Ayeaye (*Chiromys*), the sole representative of this family, is confined to the island of Madagascar. It was for a long time very imperfectly known, and was supposed to belong to the Rodentia; but it has now been ascertained to be an exceedingly specialized form of lemuroid type, and must be considered to be one of the most extraordinary of the mammalia now inhabiting the globe. (Vol. ii. pp. 176, 177.)

The Lemuroid group offers us one of the most singular phenomena in geographical distribution. It consists of three families, the species of which are grouped into six sub-families and 13 genera. One of these families, and two of the sub-families, comprising 7 genera, and no less than 30 out of the total of 50 species, are confined to the one island of Madagascar; of the remainder, 3 genera, comprising 15 species, are spread over Tropical Africa; while three other genera, with 5 species, inhabit certain restricted portions of India and the Malay Islands.

In Madagascar, where less complex conditions prevailed in a considerable land area, the lowly organized Lemuroids have diverged into many specialized forms of their own peculiar type; while on the continents they have, to a great extent, become exterminated, or have maintained their existence in a few cases in islands, or in mountain ranges. In Africa the nocturnal and arboreal *Galagos* are adapted to a special mode of life, in which they probably have few competitors. (Vol. ii. pp. 197, 180.)

## ORDER INSECTIVORA.

Family 18.—*Centetidae* (6 genera, 10 species).

The Centetidae are small animals, many of them having a spiny covering, whence the species of *Centetes* have been called 'Madagascar hedgehogs.' The genera *Centetes* (2 sp.), *Hemicentetes* (1 sp.), *Ericulus* (1 sp.), *Echinops* (3 sp.), and the recently described *Oryzorictes* (1 sp.), are all exclusively inhabitants of Madagascar, and are almost or quite tailless. The remaining genus, *Solenodon*, is a more slender and active animal, with a long rat-like tail, shrew-like head, and coarse fur; and the two known species are among the very few indigenous mammals of the West India Islands, one being found at Cuba (pl. xvii. vol. ii. p. 67), the other in Hayti. Although presenting many points of difference in detail, the essential characters of this curious animal are, according to Profs. Peters and Mivart, identical with the rest of the Centetidae. We have thus a most remarkable and well-established case of discontinuous distribution, two portions of the same family being now separated from each other by an extensive continent, as well as by a deep ocean. (Vol. ii. p. 188.)

## ORDER CARNIVORA.

Family 24.—*Cryptoproctidae* (1 genera, 1 species).

The *Cryptoprocta ferox*, a small and graceful cat-like animal, peculiar to Madagascar, was formerly classed among the Viverridae, but is now considered by Prof. Flower to constitute a distinct family between the Cats and the Civets. (Vol. ii. p. 194.)

## ORDER RODENTIA.

Family 55.—*Muridae*.

*Nesomys*, *Hypogeomys*, *Brachytarsomys*, Madagascar. Of Rodentia, Muridae alone found in Madagascar (out of 14 families).



### THE MALAGASY <sup>X</sup> GAME OF 'FANORONA.'

NOBODY can reside very long in Madagascar, or in these central parts of it, at any rate, without occasionally observing little companies of the natives bending eagerly over some mathematical looking diagram rudely scratched on roadside stone, or on the top of a rock, or, more roughly still, on the sun-baked clay of the wayside. If you look a little at the figure of the diagram, and consider the multiplicity of squares, diagonals and adjacent parallelograms involved in it, you may think the people are discussing some Malagasy rider to one or other of the propositions in the Second Book of Euclid. Take the trouble to ask, however, and you will find that they are simply playing at their national game, the *Fandrona*.

Games of skill or chance, generally speaking, do not attract much interest among the Malagasy. They have originated very few, and do not seem to care much for such as they have had opportunities of learning from Europeans. A few of the upper classes play occasionally at cards, dominoes, and loto. I have never seen dice anywhere among them, and very likely there are not fifty natives in all the island who know anything at all of chess or draughts. But they all understand the *fanorona*; that is played everywhere, in-doors and out of doors, in the town and in the country, and by all classes, high and low, young and old. Almost everywhere in the houses of the people, except the very poorest, you may find the *fanorona* board, though very often it is only the back of the *akàlana* 'chopping block' or of the *sahàfa* (wooden winnowing platter). But playing out of doors seems most attractive to the younger Malagasy, and they can extemporise a board, or a substitute for a board, anywhere. On the wooden sheds in the market-places, on the tiled paving around the school-houses and college buildings, on the stones around the open elevations where the Judges sit, on the paved way outside the Palace, on the roadsides where the palanquin bearers congregate, at the stone-gate entrances into the villages, on the flat rocks of the hillsides, on which the little slave children sun themselves while tending their masters' sheep or cattle—everywhere you may find the signs and tokens of the *fanorona* players.

The most respectable students in the L. M. S. College will frequently employ the few minutes' interval between some of their morning classes in a hasty game. I have seen two or three of our most grave and potent city pastors stop with one

accord to watch and criticize the wavering fortunes of a chance game that was being fought out on the wayside. Some of the older *andriandàhy* (chiefs) and senior officers of the palace are reputed to be the best players in the country. The venerable old princess who died two years ago at Ambòhijòky, and who in her girlhood, about fourscore years ago, was one of 'the twelve wives' of King Andrianampòinimèrina, had been in her time a famous player at the *fanorona*. There are still alive in Antanànarivo several old people who remember very well the coronation of Radàma I., in the year 1810, and the great gathering on that occasion in the plain of Imàhamàsina. All the various tribes and orders of the people were that day ranged around the King after the pattern of the various sides and diagonals and intersections of the *fanorona* ! In one of Radama's campaigns in the southern parts of the island, a Bètsiléo king, whom he was besieging, had perched himself on the summit of his stone-barricaded gateway, and in unblest ignorance of the dangerous powers of the muskets which Radama had acquired from the English, he was giving only one eye to the approaching enemy, and employing the other in a friendly game of *fanorona* with one of his officers. The poor fellow never finished his game, for an unlucky bullet put it all out his head in a moment, in its swift 'check to the king.'

Of much older date than these incidents are some traditional stories the Malagasy preserve about one Andriantòmpoko-indrindra, who should have succeeded to one of the petty kingdoms in Imerina, and who lived at Ambòhimalàza (a few miles east of the present Capital) perhaps some two hundred years ago. He seems to have been great-grandson of the famous King Andriamàsinavàlona, who reigned long and ably over the whole of Imerina, and on whose death the kingdom of the Hova was split up into several small divisions by his numerous sons. The father of Andriantompoko was king over a large part of eastern Imerina, and as this was his eldest son, he was heir-apparent to his father's kingdom. When the father began to grow old, the young chief occupied his mind by devising plans for the better conduct of his kingdom after he should attain his father's place. Public gatherings, with singing and dancing round the king, seem to have been very important parts of state business in those times, and one day, while watching some of his children, who were playing at his feet with *tsàramàso* (beans), and arranging them in straight lines and cross lines, according to their different colours, the thought struck him that he ought to have such an arrangement of the different orders of his subjects when they should be

gathered to dance around him, on the occasion of his first appearance among them as king. After consulting with his wife, and then with his wise men, he elaborated his plan, which was that of a large square divided into sixteen smaller squares, with the two intersecting diagonals. On the outer sides of the large square he proposed to arrange the 'Olo-mainty' (Black people\*); the diagonal lines were to be occupied by the Hova; the other inner lines were to be occupied by alternate rows of Hova and *andriana* (chiefs or nobles). By and by he discovered that the Olo-mainty might be aggrieved if they were arranged exclusively on the outside lines and 'out in the cold'; so he devised four small additional diagonal lines, on which some of that tribe might be ranged, nearer to the King and the centre of the gathering. This, according to the native tradition, was the origin of the *fanorona*; and the lines above described correspond exactly with the appearance of the lines of half the *fanorona* diagram as it is now used. As he had yet no opportunity of marshalling his subjects, he spent a good deal of time in working over these plans for them; and after a while he conceived the notion of arranging them also for sham fight, and the various methods for attack and defence were elaborated by him with his *tsaramaso* instead of soldiers. Finding out after a while that the attacked side, properly defended, would be always victorious, he doubled the number of squares on his mimic field, and succeeded in immensely improving the 'scientific' character of the game, and very greatly increasing the possibilities of careful moves both for attack and for defence.

Thus runs the native tradition as to the origin of the *fanorona*, and I am rather disposed to believe that the account is substantially true. At first, I thought it mythical, and was inclined to suppose that the game must have been introduced into Madagascar by the Arabs. It will be seen at a glance that the 32 squares of the *fanorona* are precisely similar to those on the half of an ordinary folding draught-board or chess-board. The moving and capturing power of the pieces is not unlike that of the draughtsmen; every piece is of identical power and value, just as in draughts; and the number of pieces employed on each side in the earlier and simpler form of the *fanorona* was just twelve, the same as employed on each side in draughts. Now, if I do not mistake, the game of draughts was introduced into England or Scotland from Egypt, two or three centuries ago. It seemed therefore possible enough that the Malagasy *fanorona* was originally a variety of the draughts game; that both games

\* Still a recognized division of the inhabitants of Imerina. They are descendants of dark and non-Hova tribes captured in former wars, but are now free people.—EDS.

were invented by the Egyptians or Arabs; and that, just as English sailors or travellers carried the one game to Britain, the Arab sailors and traders may have brought the other game to Madagascar. Now, however, after considering the apparently unvarying character of the native tradition as to its local origin, and the undoubted facts that the *fanorona* lines have been repeatedly used in arranging the various clans and orders of the people around the sovereign on the great festival days at Imahamasina—these and some other circumstances dispose me to believe that the game is of Malagasy origin, and probably arose in some such way as stated in the traditionary account which I have roughly given above.

Before proceeding to describe particularly the method of playing the *fanorona*, there is another little story about Andriantompokoindrindra which is too good to be left untold. The King his father, who reigned, I believe, at Ambôhidrabiby, happened to be at war with some of his neighbours, who made a raid on his territory and were marching up against him in his capital. Messengers were sent out hastily to his sons, who had been placed in charge of various towns round about, that they must come at once with their soldiers to meet the approaching enemy. As soon as the younger sons heard, they arose at once and went to the father's help. But when the messenger came to Ambohimalaza, Andriantompoko was engrossed with a difficult position in his favourite game, the *fanorona*; and the answer he returned to his father's message was: "Yes, but I will finish this game of three against five first." The messenger returned with the answer he had got, and after a long delay Andriantompoko arrived with his forces. But he was too late, for the enemy had been routed already. And the tough old King his father, along with the elders of the people, resolved that day that neither Andriantompoko nor any of his descendants should ever be allowed to reign, seeing that he had flung away the kingdom for his "three against five." Curiously enough, the descendants of this man, the Zanatômbo, still reside at Ambohimalaza, and their family is still known by the name of Andriantompokoindrindra. And the circumstances of their ancestor's disgrace are said to be preserved in the current proverb: "Three against five, and toss away the kingdom" ("*Telo no ho dimy mahavery fanjakana*"). How "history repeats itself"!

The *fanorona* board is a rectangular parallelogram, divided into 31 equal squares. Gather these, in your eye, into eight larger squares, containing four each; draw the diagonal lines in each of the eight, and the *fanorona* figure is complete. Forty-

four movable pieces are required for the game—twenty-two on each side. With the Malagasy these are usually little pebble and potsherds, or beans and berries. We, however, will call them the Black and the White pieces. The two players sit opposite each other, having the long sides of the *fanorona* adjacent to them. The pieces are then arranged on the corners or angle-points, not on the squares, as in chess or draughts. There are five of these long lines on the board, each containing of course, nine angle-points, and the pieces are thus arranged:—

Black:	First Line	1....9
	Second „	1....9
White:	Fourth „	1....9
	Fifth „	1...9

The third, or central line, is occupied by the eight remaining pieces, placed alternately thus:—

Black	1, 3, 6, 8
White	2, 4, 7, 9

One point remains unoccupied, the central angle-point of the board, the fifth of the third line. This represents the royal seat in the public gatherings, but in the *fanorona* game it is called the *foibény* ('navel').

The object aimed at by each of the players is, as in draughts, to remove the whole of the adversary's pieces from the board. But much caution is required, for we shall see that a few pieces well posted may easily annihilate more than four times their number in weaker situations; and, as in real warfare, even the very numbers of a force may sometimes prove their ruin. A few examples here will show the various ways in which the game may be opened, and the manner in which the pieces are moved and the adverse pieces captured. Let us suppose that the pieces are all placed, as just described above (see diagram 1). For convenience of description let the five lines on which the pieces are posted be called respectively A, B, C, D, E, instead of first line, second line, third line, etc. Any one of these letters then, with a numeral appended, will be an easy reference to the piece that is to be removed, or to a hostile piece that has to be captured and removed from the board. The remember:—

First, that a piece may be moved in any direction—forward backward, sideways, or diagonally, to the first station in that direction, if such station be vacant.

Second. If there be now no other vacant station between the attacking piece just moved and the enemy's piece along that line, these, whatever their number, are captured at once as far as they stand in unbroken order on the line attacked

If, however, a vacant position occurs in their line, or another hostile piece is among them, then only the piece or pieces nearest the assailant are captured.

Thirdly. The pieces of the enemy may be captured by a retreat as well as by an advance. A piece that has been standing in an adjoining station to some piece or pieces of the enemy may capture it or them by retreating one point along that line, if such point happens to be vacant. The limitation defined immediately above applies in this case also.

Fourthly. At the beginning of a game one move only is permitted to the first side. After that side has moved once, any piece that is moved is permitted to run amuck in the enemy's lines, and to go on as long as he finds foes to capture, provided (a) that he does not return immediately to any point he has just left, and (b) that he does not take a foe behind him immediately after taking one in front of him, nor one on his right hand immediately after taking on his left hand, and *vice versa*. "Dont eat at both ends, like a leech," says the Malagasy proverb.

Let us suppose that White is going to move first at the commencement of a game. There is only one vacant point on the board into which he can move a piece, namely the *foibeny* or central point, which we may term C 5, as it is the fifth point of the third line. There are four white pieces, of which any one may be moved into the vacant post, those on C 4, D 4, D 5, D 6. If he advances D 5 to C 5, then he immediately captures Black's pieces on B 5 and A 5. Black may now retaliate by withdrawing his piece on B 6 to A 5, thereby capturing White's pieces on C 7, D 8, E 9. White may now, in any one of several ways, inflict a series of severe strokes on the unfortunate Black. Thus, for example,

D 6 to C 7, taking B 8, A 9; then  
 " B 6, " A 5;  
 " B 5, " B 4, B 3, B 2, B 1.

Now the White piece must stop awhile, for, although the Black piece at B 7 is under his range, yet in taking it he would be transgressing the two laws mentioned above. He would have to return to B 6, which he has just quitted, and he would be "eating at both ends, like a leech," which is improper. But the black piece on B 7 may now very properly provide for his own safety and circumvent his assailant by advancing thus:—

B 7 to C 7, taking D 7, E 7; then  
 " D 6, " E 5; then  
 " D 5, " D 4, D 3, D 2, D 1; then  
 " E 5, " C 5, B 5.

These moves are not given as examples of what the Malagasy would consider good play, but simply to show the *modus operandi* of the game.

The game subjoined may be considered an average specimen of native skill.

## FANORONA GAME.

WHITE.	BLACK.
1. D5 to C5 takes B5, A5.	1. B6 to A5 takes C7, D8, E
2. E8 ,, D8 ,, C8, B8, A8.	2. C6 ,, B6 ,, D6, E6.
	,, C7 ,, D8;
	,, D6 ,, E5;
	,, D5 ,, D4, D3, D2,
	,, E5 ,, C5;
	,, E6 ,, E4, E3, E2,
3. D7 ,, C7 ,, B7, A7;	3. E6 ,, E5 ,, E7.
,, B8 ,, A9;	
,, B7 ,, B9.	
4. C4 ,, C5 ,, C3;	4. C1 ,, D2.
,, D6 ,, B4, A3;	
,, C7 ,, E5;	
,, B6 ,, A5;	
,, C6 ,, A6.	
5. C6 ,, C5.	5. D2 ,, E2 ,, C2.
6. C5 ,, B4.	6. B2 ,, C1.
7. B4 ,, C4 ,, A4.	7. C1 ,, D2.
8. B7 ,, B6.	8. E2 ,, E3.
9. D9 ,, D8.	9. A2 ,, B2.
10. B6 ,, A5.	10. B2 ,, C1.
11. D8 ,, D7.	11. A1 ,, A2.
12. D7 ,, D6.	12. D2 ,, D3.
13. C9 ,, B8.	13. C1 ,, C2.
14. C4 ,, C3 ,, C2.	14. B3 ,, A2 ,, C3;
	,, A4 ,, A5.
15. B8 ,, C7.	15. E3 ,, E4.
16. C7 ,, B6.	16. A2 ,, B2.
17. D6 ,, D7.	17. D3 ,, D4.
18. B6 ,, C5 ,, D4.	18. B2 ,, A3.
19. C5 ,, B4 ,, A3.	19. B1 ,, C1.
20. B4 ,, C4 ,, A4.	20. E4 ,, D4 ,, C4.
21. D7 ,, C7.	21. C1 ,, C2.
22. C7 ,, C6.	22. C2 ,, C3.
23. C6 ,, C7.	23. C3 ,, B4.
24. C7 ,, B8.	24. B4 ,, C5.
25. B8 ,, C8.	25. C5 ,, B6.
26. C8 ,, C9.	26. D4 ,, C5.
27. C9 ,, C8.	27. C5 ,, D6.
28. C8 ,, C9.	28. D6 ,, C6.
29. C9 ,, D9.	29. B6 ,, C7 and wins.

If the game happens to terminate in a 'draw,' which is frequently the case, then the combat may be recommenced on same terms, the other side now taking the first move. Sho

one of the players have been defeated, however, he is not allowed to play on the same footing as before, for the game must be altered in a kind of mocking condescension to his weakness. The new form of the game is called the *Véla*; the one who has conquered is the *mpampihinam-béla* (he who allows to graze at large); the defeated is *homam-béla* (a poor sheep not to be molested for a while in his pasture ground). The *vela* game is opened by the victor, who puts forward such of his pieces as he chooses to surrender to his antagonist. These pieces may only be taken singly, and the generous conqueror refrains from taking any of his enemy's pieces, until he has parted with, one by one, 17 of his own pieces; then, with the remaining five, he begins his campaign against the undiminished forces of his antagonist. If he be a skilful player, however, he has managed meanwhile to occupy the fortress positions of the game; and the hosts of the enemy are probably scattered in such situations that he will come down on them "like a wolf on the fold." If the *homam-béla* is again defeated, he is only allowed to play the *vela* form of the game until he has redeemed himself by a victory. Or he may choose to humiliate himself by openly confessing his inferiority, though, as one of my informants says, "few of the Malagasy are willing to do that." In ancient times grace was accorded to the beaten combatant on condition of his kneeling down before his conqueror and bleating like a sheep (*mibàrarèoka*), in confession of his weakness.

Here is a specimen of the *vela* game, including the preliminary sacrificial moves by which Black gives up, one by one, the fated 17 pieces. Then the time of reprisals comes, and the five survivors take the field and will give and take no quarter.

## VELA GAME.

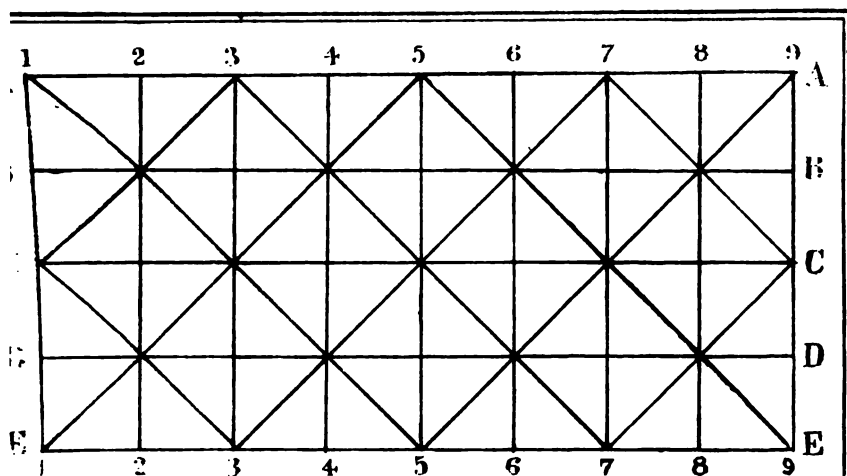
WHITE.	BLACK.
1. C4 to C5 takes C6.	1. C3 to C4.
2. C5 " C6 " C4.	2. B7 " C3.
3. D4 " C5 " B6.	3. A7 " B6.
4. C5 " B4 " A3.	4. A8 " A7.
5. D5 " C5 " B5.	5. A2 " A3.
6. E5 " D4 " C3.	6. A9 " A8.
7. C2 " C3 " C1.	7. A3 " A2.
8. D2 " C2 " B2.	8. B1 " B2.
9. B4 " B5 " B3.	9. A4 " A3.
10. C3 " B3 " A3.	10. A2 " A3.
11. D4 " C3 " B2.	11. A3 " A2.
12. C2 " B2 " A2.	12. A8 " A9.
13. B5 " B4 " B6.	13. A5 " B6.
14. B4 " B5 " B6.	14. A7 " B6.
15. B5 " B4 " B6.	15. B7 " B6.



WHITE.		BLACK.	
16.	B 4 to B 5 takes B 6.	16.	A 9 to A 8.
17.	C 6 „ B 6 „ A 6.	17.	Now begins Black's attack. B 8 to A 7 takes C 9;
18.	D 9 „ C 9 „ B 2.	18.	C 8 „ B 7 „ C 7, D 7, E 7. „ B 8 „ D 8, E 8; „ C 7 „ D 6; „ D 8 „ E 9; „ E 7 „ C 9; „ D 6 „ C 5; „ C 6 „ E 6.
19.	B 6 „ A 6 „ C 6.	19.	B 7 „ B 6 „ B 5.
20.	A 6 „ A 7 „ A 8.	20.	B 6 „ C 5 „ A 7; „ C 4 „ C 3; „ D 4 „ E 4; „ C 3 „ B 2; „ D 2 „ E 1; „ C 1 „ E 3; „ B 1 „ D 1; „ B 2 „ B 3.
21.	D 3 „ C 3.	21.	A 1 „ A 2.
22.	C 3 „ D 4 „ B 2.	22.	A 2 „ A 3.
23.	E 2 „ D 2.	23.	A 3 „ B 3.
24.	D 2 „ C 1 and wins.		

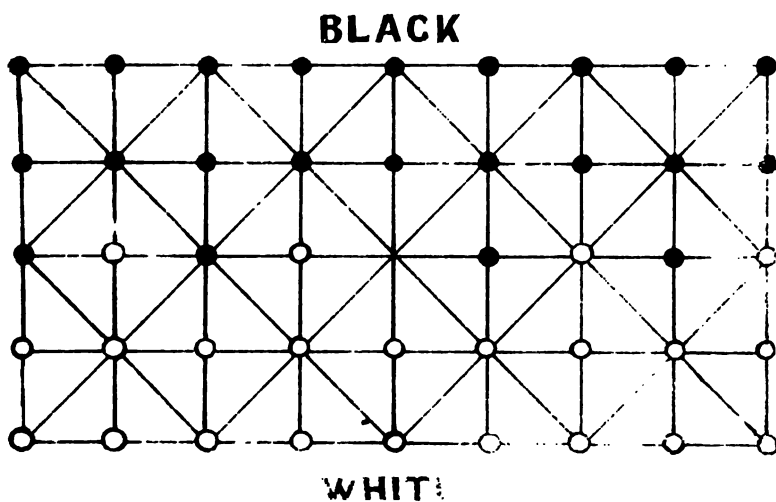
I would just say, in conclusion, that although the *fanorona* is still very popular with the people, and their interest in the game not at all likely to decay, yet probably it will not in future years be so largely practised as it is now. Life is growing every year more serious for the Malagasy. The felt necessities for education are filling up more and more the lives of the young people. Competitions are becoming more eager, and the burdens of responsibilities are being felt more weighty, both in the State and in the churches and in the market-places. The *fanorona* will do no harm to the busy and to the sensible, while the idler and the fool may be at times detained by it from worse employments. Occasionally, I suppose, a few young fellows are foolish enough to gamble over it; and, just as with chess and draught players in England, a few here and there may be tempted by it to forget their proper business. The Malagasy say that in old times their ancestors employed the *fanorona* as a means of begetting and extending friendly feelings among their neighbours; and I have no shrewder words to say of it than those said to me by a clever young native, to whom I am indebted for much of the information in this paper: "We cannot call it a good sport, and we cannot call it a bad one; but it may be either good or evil according to the character and circumstances of those who engage in it."

W. MONTGOMERY.



## N<sup>o</sup>.1.-THE FANORONA BOARD.

*The Letters and Figures here will be a key to the descriptions.  
given in the article.*



## N<sup>o</sup>.2.-FANORONA BOARD WITH PIECES.

*as arranged at commencement of Game.*

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## MALAGASY ROOTS :

## THEIR CLASSIFICATION AND MUTUAL RELATIONS.

I WISH in the following paper to write of Malagasy roots with more fulness than, so far as I am aware, they have yet been treated. In doing so it will be necessary to repeat some facts with which all who know Malagasy are perfectly familiar; but this repetition will I hope be excused for the sake of the greater clearness we shall gain from taking a complete and comprehensive view of the phenomena presented.

The Malagasy being an agglutinative language, the root has more importance than in languages of other classes, and is more prominently thrust upon our notice. Thus such a root as *sôlo* (substitute) is clearly seen in a vast number of derivatives, e.g. *misôlo*, *misôlôa*, *isôlôana*, *fisôlôana*, *mampisôlo*, *ampisôlôana*, *mifampisôlo*, *ifampisôlôana*, etc., etc. At the same time the Malagasy language has a greater tendency to obscure the root than some other members of the same class; and indeed often almost entirely hides it in the midst of lengthy prefixes and affixes; e.g. in the word *ifandavana*, from the root *la*, the *a* alone remains unchanged, the *l* of the root having become *d*; in *ampdnôhôfy*, only *ôh* of the root *hohoka* remains unchanged, the first *h* having disappeared on the assumption of the prefix *man* (*manôhoka*), and the *k* of the final syllable having become *f*; in *mpifamôdhina* again, only the *o* remains unchanged: the *m*, however, suggests to one familiar with Malagasy forms one of the labials, and the *h* in *hina* also suggests the terminal *ka*, and so we are soon led to *pôka*, the root of the word. Similarly, on appending the pronominal suffixes, the Malagasy in certain cases cut off the final syllable, e.g. *mpiânatra* becomes *mpiânany*, *mpiânatsika*, etc. The Malay does not, I think, allow such a contraction as this, but appends the suffix to the unchanged word.

I will not, however, occupy time in showing how roots may be detected, as a little familiarity with the derivative forms soon enables one to pick out the roots of all ordinary words; but will confine myself to the roots themselves, and as a first step it is desirable we should bear in mind the three main classes into which the great majority of roots may be arranged.

*Class I. Monosyllables.* These are rare: if we exclude conjunctions, interjections, etc., there do not seem to be more than twelve or thirteen, and as they are so few I will give all I have noticed:—

(1) *be*, much, many (Malay *besar*; Jav. *kabê*). The *s* of the Malay form appears in Malagasy as *z* in *habiazina*, etc., and as *ts* in *bétsaka*, much.

(2) *da*, renown. With this compare *so*, which is perhaps only another form of the same word.

(3) *fe*, thigh (Malay *pah*; Polyn. *væ*).

(4) *fy*, delicious.

(5) *fo*, the heart.

(6) *la*, to refuse (Swa. *la*, no, from the Arabic (?).

- (7) *lo*, rotten.  
 (8) *ra*, blood (Malay *darah*; Jav. *rah*).  
 (9) *re*, violence, as of the waves; another form is *ria* (Kawi *ro*, violence).  
 (10) *re*, heard; this, however, seems to have been shortened from *riny* (*tsy rentho = tsy reko* is still occasionally heard, and the *n* appears in the derivatives, e.g. *mandrentsa*, *andrentsana*).  
 (11) *to*, accomplished, fulfilled (Kawi *to*, just, true, genuine); the Swahili derivation given in the Dictionary is unnecessary.  
 (12) *tsy*, steel.  
 (13) *zo*, renown (Swa. *zuri*?). Comp. *da*.

Among the above, which from their simplicity one would expect to belong to the primitive stock of the language, Marre-de Marin (Gram. p. 14) notes that *to*, *fe*, *ra*, *re* are Malayan; to his list we may add *be*; and perhaps the remaining words *da*, *zo*, *fy*, *fò*, *lo*, *re* (heard), may also with fuller knowledge be hereafter identified.

**Class II.** *Dissyllables ending in o, y, or firm a.* By 'firm a' is meant an *a* not belonging to one of the weak terminals (see Dictionary, p. xxxii. note). Roots of this class are very common; e.g. *ràno*, water; *llo*, umbrella; *aso*, got; *fiàdy*, choice; *diàdy*, cutting; *iàny*, earth, land; *vòha*, opened; *sòla*, bald. They are all accented on the first syllable.

**Class III.** *Dissyllables and trisyllables ending in the weak terminals ka, tra, na.* These too are accented on the first syllable, and no root not of this class can be accented on the antepenult. This class is very large, and examples will be found in abundance in the Dictionary; the following will serve as samples: *tàmpoka*, suddenly; *kípaka*, pushed off; *fàtratra*, earnestly, thoroughly; *hènatra*, shame; *nénina*, regret; *hàsona*, held; *fàtra*, measured (as grain); *pòka*, knocked against; *dòna*, same as the last.

Into the above classes almost all primary roots fall. Some apparent exceptions are words borrowed from other languages; e.g. *kafé* (Fr. *café*), coffee; *kardma*, wages (Swa. *gharama*); *misàna*, scales (Arab. *misān*); *lalàna* (formerly *laloàna*; Fr. *la loi*).

The third class probably contains the largest number of roots in the language. But although for grammatical purposes they are considered roots, there are weighty reasons for considering them rather as modified and enlarged, than as absolutely primitive, roots, and their light terminals *ka*, *tra*, and *na* as additions to the original word. The reasons for this opinion are the following:—

(1) The light terminals are often omitted in some of the provincial dialects. Thus we find *ndma* for *nàmana* (companion), *làka* for *làkana* (canoe), *fàsy* for *fàsika*, (sand, e.g. in the tribal name, *Taifàsy*). Even in Imerina we find examples of the same thing, as for instance in *làsa* and *làsana* (gone), *isa* and *isaka* (each), *iray* and *iraika* (one). Occasionally the shorter form is in use in Imerina and the lengthened one in the provinces; e.g. Hova *hàla* (spider), prov. *hàlana*; Hova *fòhy* (short), prov. *fòhika*.

(2) In certain words these terminals are interchanged; e.g. *fàsika* and *fàsina*, sand (the existence of the form *fàsina* is shown by the proper names *Ampàsimbè*, *Ampàsimpòtsy*, *Pàsindàva*, etc. This is an extremely instructive example. The Malay form of the word is *pasir*; the final

*r* of which disappears in *Taifasy*, becomes *na* in *fásina*, and *ka* in the common form *fásika*). Other examples are *élanéana* and *élahéana*, between; *trébaka*, *trébaka*, *trébatra*, *trébatra*, pierced; *dvana* and *dvaka*, chips; *tàrika* and *tàritra* (*taritina*), drawn; *lohàlika*, knee, is among the Bèzàozàno called *lohàlitra*; *afnana*, the lower part of the arm, is also called *afnaka*; *lòatra*, too much, is in some parts pronounced *lòana*; *hàzona*, held, appears with a final *tra* in the secondary form *sangànotra*, caught in a thicket. And so we might go on adding examples almost *ad libitum*, but the above are ample to show the freedom with which these light terminals may be interchanged. Usually no change of meaning is caused by the change of the terminal, but sometimes a slight modification of meaning is caused; thus *pòtsitra* means to burst (as a boil), but *pòtsika* means crushed, broken; *fàhy* (*mamàhy*) is to fatten cattle, but *fàhitra* is the name of the pen in which cattle are kept during the fattening; *fàtra* means to measure (rice, etc.), *fàsitra*, shaken down (as rice in a measure).

(3) Many examples are found (as already shown in some of the above examples) in which the simple roots exist side by side with the lengthened forms. Thus from *ria* (*re*), the rush of water (*ràno maria* or *marà*, rushing water), we have *riana*, a waterfall, *mikoriana*, to flow (as water over a rock), and *riaka*, rushing streams of water after a heavy rain. So too from *sòdisòdy*, hovering, we find *misòdika*, to hover; and from *rèra* (*rèrarèra*), hanging loosely, we have *rèraka*, weak, faint; and from *ròmòdy*, weariness, we have *ròzika* (*miròzika*), languishing; from *ròba*, pillage, we have *ròbaka* and *ròmbaka*, in much the same sense. So too we find *òlòdy*, curling, *òlòlòlika*, twisting; *lèla*, tongue, *lèlaka*, to lick (though here the analogy of languages would lead us to think the *k* must be an essential part of the word; compare for instance Sans. *lih*, Gr. *leicho*, Lat. *lingo*, Heb. *lakak*, Germ. *lecken*, Eng. *lick*, Irish *lighim*, etc.).

(4) The light and uncertain character of the *tra* is shown by the substitution for it among the Bètsilèo of *isa*; but at the same time in forming passives, etc., the essential elements of the root are maintained; thus, for example, while they say *mamaitsa* for *mamaitra* (root, *faitra*, comp. the name *Andriamamaitrarivo*), they form the passive in the usual way, *fèrana* (not *fètsana*, or some similar form).

(5) The fondness of the Malagasy for these light terminals is well illustrated by the way in which they use them in giving a Malagasy form to introduced foreign words. Thus the French *livre* becomes *livatra*; *caisse* (or Eng. *case*) becomes *késika*. Similar changes are made in proper names; thus *Stueland* becomes *Tsitlalànitra*; *Wills*, *Oilitra*; *Fox*, *Fad-kitra*; *Capsey*, *Kàpitra*; *Sims*, *Simpitra*.\*

(6) Very instructive also is a comparison of these Malagasy forms with the cognate languages. Occasionally the light terminals are found to represent different final consonants in the Malayan languages. Thus *na* may represent a final *n*, as in *dnona* (so and so)=Malay *anun*, and *and-rana* (name)=Malay *ngaran*; or *ng*, as in *amàlona* (eel)=Malay *malung*;

\* One of the latest and strangest of such changes is that by which the word 'resident' (i.e. the French *Resident*) is pronounced *rési-an-dànitra*, which, literally translated, would be 'conquered in heaven'!—EDS.

or *r*, as in *lamôsinâ* (back)=Malay *lamusir*; *kâmbana* (twins)=Malay *kambar*. So too *tra* may stand for a Malayan *t*, as in *faitra* (bitterness)=Malay *pait*; *lômotra* (slime, moss, etc.)=Malay *lumut*; or for *p*, as in *âtrika* (facing)=Malay *hadap*, Javanese *adep* (of this word we shall have to say more below); or for *s*, as in *mânitra* (fragrant)=Malay *manis*. We have also seen above that *ka* may represent a final *r*, as in *fâsika* (sand)=*pasir*.\*

Sometimes the true root is obscured in the Malagasy root form, but reappears in the adjunctive derivatives. Thus *sôkatra* does not readily suggest the true root (*sokâf*, or *sokap*), which can only be seen in the derivatives *sokâfana*, *sokâfy*, etc. The Malayan forms *akkap*, *singap*, show that the true root is better preserved in the derivatives than in the grammatical root *sôkatra*. So too in *minona* (to drink), the true root of which *inom*=Malay *minum* appears in the passive *inômina*, etc; and so also in *velôna* (living), passive *velômina* (=Malay *belum*).

But not only do the primitive roots receive these light terminal syllables, they are also often enlarged in two other ways: (1) by the insertion of an infix; (2) by the addition of a monosyllabic prefix. Roots thus enlarged are conveniently named "secondary roots."

The syllables used as infixes are *om*, *on* (*in*), *ol*, *ar*, *er*. They are inserted immediately after the first consonant of the primary root, and cause no change of accent.

Thus the root *hêhy* (laughter) becomes *homêhy*, which may be used as a participle (laughing), or may become the root of a regular verb, *mihomêhy* (to laugh), from which again a whole family of derivatives spring (*mihomehêza*, *ihomehêzana*, *mampihomêhy*, etc. etc.). In the same manner we get *lomâno* (swimming) from *lâno*; *serêntosênto* (sighing) from *sênto*; *karépoka* (the sound of anything crushed) from *kêpoka*. So too from *bitika* (anything very small) we have *birttika*, *bolttika*, and similar forms; *kitika* (with the same meaning) also becomes *kijitik*.

These infixes have been shown by the Rev. L. Dahle and M. Marrede Marin to be a distinguishing feature of Malayo-Polynesian languages, and hence they have great significance in determining the true position of the Malagasy language, and would in themselves almost decide the question. The above-named writers enumerate *in* and *om*, which are the forms of infix most commonly met with; to these I have added *al* and *ar* (*er*), as these too are given by the Abbé Favre in his Malay Grammar, and are proved to exist in the Malagasy language by the above examples. I think it highly probable that a careful analysis of roots would lead to the detection of many more examples, and probably of other syllables used as infixes. The word *lonjêhitra* (comp. *lônjitra*) would seem to suggest an infix *eh*; but in the absence of other examples or of Malayan analogies it would perhaps be rash to insist upon this.

The monosyllabic prefixes used in forming secondary roots are very numerous (*an*, *ba*, *be*, *da*, etc.). Like the infixes, they cause no change of accent, which still remains on the first syllable of the primary root. It

\* Occasionally the Malay has a final consonant which is not represented in the Malagasy form; thus *ala* (forest) is in Malay *alas*; *fana* (hot)=*panas*; *valy* (answer)=*walas*; *lasy* (lake)=*lasik*; *omâly* (yesterday)=*kumarin*.

is not easy to give any general idea of how they modify the meaning of the primary root. Sometimes they appear to be simply ornamental, and one is almost tempted to call them "ornamental monosyllabic prefixes." But as they do often produce a distinct modification of meaning, I have in the Introduction to the Dictionary given them a name that involves no theory as to their use or meaning, and have called them (from the first and last examples given in my list) the *an-sa* prefixes. For examples see *Dictionary*, p. xviii.

Our analysis of the roots and their various enlargements leads us to conclude that it may be laid down as a general rule that all primitive roots were monosyllables, or dissyllables accented on the first syllable. I do not, however, mean to assert that we can in all instances point out the primitive root (for many words must still remain unexplained by the foregoing hypothesis); but as a general working rule to guide us in our comparison of the elements of the language we may safely follow it, and may accordingly, in seeking for primary roots, and in instituting comparisons with other languages, disregard: 1° an unaccented primary syllable (e.g. *iam* in the word *tambólina* (*vólina*), as this will most probably prove to be an *an-sa* prefix; 2° an unaccented syllable formed by a consonant and *om*, *on*, *il*, *er*, etc., as here we shall probably on close analysis find we have an infix inserted in the primary root; 3° the weak terminals *ka*, *tra*, *na*, as these we have seen are frequently additions to, or modifications of, a primary root.

But even after having eliminated these accretions, we cannot always be sure that we have before us the true root. Comparison with the cognate languages has already shown us how a root may be obscured, and I think it also leads us to look, not so much to the grammatical root, as to that form which may be regarded as the stem or base of the adjunctive forms, as in the examples *sókatra* and *dtrika* already given above. Many anomalies disappear when, following out this principle, we compare the stem thus given with Malayo-Polynesian forms. Let us take for example the root *kiky* (scraping), from which we obtain the passive *kikisana*. Removing the final *ana*, which in an ordinary passive affix, we get the stem *kikis*. Comparing with this the Malayan equivalent (*kikis*), we find we have exactly the same form. In former times we were wont to regard the *s* in *kikisana* as a consonant inserted for the sake of euphony; and that the Malagasy, like the Malays (Favre's Grammar, § 3), do insert at least one consonant, viz. *h*, euphonically in such words as *fihaviany* (*avy*), is not denied; but this inserted *h* is but a stronger form of the diæresis, and in some words where we should be disposed to insert it (e.g. *miha-hosa*), the natives who sit on the Bible Revision Committee deny its existence altogether, and affirm that *mihaösa* is the correct form. *Mahà-rikivy* (acid; root *ivy*, saliva) has been given as an example of a euphonic *k*, as though the word were from *mahàry* (to produce) and *ivy* (saliva); but another explanation is to be found, and one that seems to me much more probable, viz. that we have simply a combination of *mahary* (to produce) and *kivy* (saliva), *kivy* being another and fuller form of *ivy* (weakened first to *hivy*, and then, by omission of the aspirate, to *ivy*), and one still found in the language of Gilolo. It appears far more reasonable to seek for the existence of such so-called euphonic consonants in



some form of the word actually used at an earlier stage in the development of the language, than to consider them arbitrarily inserted; and it is not easy to perceive why *kiklsana* should be more euphonious than *kikiana*, which would be the regular form.

Of course if such a word as *kiklsana* stood alone, we might not venture to base a general argument upon it, but it is by no means an isolated example; and I proceed to give others tending to show how apparent anomalies in Malagasy forms disappear, when we compare them with their Malayan equivalents:—

*Ampàly* (a shrub or tree (*Ficus soroceoides*), the leaves of which are used as a substitute for sand-paper); pass. *ampaltsina* (smoothed with *ampàly* leaves). The *s* in the passive *ampaltsina* does not appear in the Malagasy root *ampàly*, but is found in the Malay *ampalas*.

*Atrika*; pass. *atrèhina* (faced). In this word the true root is not apparent in the Hova form, but is retained in the provincial *atrèfina*, the stem of which (*atref*) is easily seen to be but a slightly modified form of the Malay *kadaŋ*, and the Javanese *adeŋ*.

*Be*, *bètsaka* (much, many); pass. *habiaŋina* (increased). Here the Malay form is *besar*, the *s* of which appears in *bètsaka* as *ts*, and in *habiaŋina* as *z*.

*Fia* (to grasp); pass. *fiàzana*. The *z* of the passive is represented by the *s* of the Malayan root, which is *peres*.

*Hèhy* (scraping); pass. *hehtzina*. The Malay is *kakas*.

*Hèry* (strength); pass. *herézina*. The Malay is *karas*.

*Inona* (drinking); pass. *inòmina*. The Malay is *minum*. This word possesses special interest. In the Malay it means simply to drink, as it still does in the coast dialects of the Malagasy; whilst among the Hova it is used only of drinking the poison ordeal (*tangèna*).

*Lèfa* (set free); imp. *alefàso*. The *s* in *alefàso* is shown in the Malay form (*lepas*).

*Lèlaka* (licked up); pass. *lelàfina*. The *f* of *lelàfina* may be illustrated by the Dayak *jelaŋ*. Which should here be considered the original consonant may be doubtful; compare what has been already said on p. 159.

*Nify*, *tify*; adj. *manify* (thin); prov. pass. *tifisina*. Malay *nipis*; Javanese *tipis*.

*Sàly* (roasting); *salàzana* (a gridiron). Malay *salayan*; on the use of *y* for *z*, comp. Marre-de Marin, p. 8, note (1).

*Tèty* (to pass across); *tetézana* (a bridge). Malay *titi*, *titiyan* (*y* for *z* as in *salàzana*).

*Tsentsitra* (sucking); pass. *tsentsèfina*. Malay *sasap*; Batak *sosop*, or *seseŋ*.

The above examples are taken from the valuable pamphlet of Van der Tuuk\* (comp. especially pp. 4, 15, 16, 18); and considering them as a whole, we cannot but feel how much more reasonable it is to seek the explanation of apparent anomalies in the actual history of the language, than to allow ourselves to be put off with such an explanation as "euphonic changes of consonants," or "euphonic insertion of consonants." At the same time we must confess that though the above examples seem to start us on the right road, there still remain many words that

\* Published by Trübner (*Four. Roy. Asiat. Soc.* xi. 1864).

with our present knowledge we cannot well explain; e.g. the *f* in *hirifina* and the *m* in *tenômina* cannot at present be explained by reference to cognate languages; and we must conclude either (1) that other forms once existed in the Malayo-Polynesian stock; or (2) that the Malagasy may have been led by analogy to use these consonants, even when their use was not warranted by the original form of the root. Malagasy philology is still in its infancy, and much light remains to be thrown on obscure points.

Having now briefly shown the way in which roots may be conveniently classified, and the ordinary methods in which they are enlarged and modified, let us proceed to examine some of their less obvious changes, and the manifold relations they bear to one another, and how they thus branch out into many directions and form large and widely extended families or groups, each of which appears to have sprung from some one fundamental root. Slight modifications arose, sometimes perhaps only accidentally, sometimes purposely; and often with the slight change of form arose some modification of meaning, thus gradually increasing the stock of synonyms, and enriching the language by enabling it to distinguish nearly-related ideas. The chief modifications I have noticed may be thus classified:—

(1) *The use or omission of certain consonants at the beginning.* The commonest illustrations of this occur in the use or omission of the aspirate. From the analogy of other languages one would naturally anticipate in a language so little cultivated as the Malagasy some uncertainty as to the use of the aspirate. And observation entirely agrees with such anticipation, as may be seen by consulting the Dictionary under the following words: *aloalo* and *halo*, *alobôtra* and *halobôtra*, *anjaka* and *hânjaka*, *atôfa* and *hatôfana*, *ila* and *hila* (compare too *hilana* and *tongilana*). Under this head may also be compared *ibakêbaka*, intermediate space, and *habakêbaka*, the firmanent or expanse; also *hâzaka* or *hâzakâzaka*, running, and *êzaka*, running, or exertion generally. Possibly also a similar relation exists between *azo*, got, obtained, and *hâzona*, held, and between *hény*, sufficient for, *hénika*, full, and *énina*, fully supplied with.

In a similar way we find other consonants used or disused, and sometimes causing a slight modification of meaning; e.g. *ômba* and *bômba*, to cover, *ôngotra* and *fôngotra*, plucked up, *dmpatra* and *lâmpatra*, stretched at full length, *endaka* and *sêndaka*, peeled off, pulled off; so too *âtitra*, carried, and *lâtitra*, carried away gradually in small portions. In the provinces we find *ilo* used for *tsilo*, a torch; and *êtra*, a hem, with which compare the Hova *saitra*, sewing.

(2) *Interchange of consonants.* (a) *The labials (p, f, b, v).* Examples of interchange of labials are very common; e.g. *paoka*, to swoop down on any thing, to carry off, and *faoka*, to wipe off; so too *lêfitra* and *lêpika*, folded; compare too the words *rêba* and *rêfarêfa*. Again we have *vila* and *bila*, crookedness; *hâvana* and (prov.) *hâba*, a relation; *vêtivêty*, *vêtivêtika*, a short time, and *bitika*, small; *bôry* and *vôry*, round; *bôlana* and *vôlana*, speech; *bôraha* and *vôraha*, unbound, loosened; *bôaka* and *vôaka*, to go out; and many others which may easily be found in the Dictionary.

(b) *The gutturals (h, k, g, ng).* Thus we find *sâhana* and *sâkana*, to

place across, to prevent; *gaika*, to call, and *haika*, to challenge; *grika*, a point or dot, and *hrika*, a small hole; *hòho* and *angògo* (prov.) nails; *fihina*, *fihitra*, and *fikitra*, to grasp; *kòsina*, *hòsina* and *hàsina*, twined; *hèhy* and *hòhy*, to scratch, and *kiky* to scrape, gnaw; *hèhy*, laughter, and *kikikiky*, giggling; *fongatra* and *fokatra*, appearing, as a rat from its hole.

(c) *Other letters.* D and L. The interchange between these is extremely common, and in certain districts, especially on the West Coast, almost constant; thus *vady*, partner, becomes *vály*; *vadika*, to overturn, becomes *valika*. In this, as in some other peculiarities, the provincial form is nearer the Malayan than is its Hova equivalent; thus the Malay for *vaddika* is *balik*, or *membalik*. Many examples of the interchange of *l* and *d* occur also in the Hova; thus both *dàngadàng* and *làngalàng* are used to signify 'tall,' and *dingidingy* and *lingilingy* 'height.'

D and T. As illustrations of the interchange of these letters we have *dòhaka* and *tòhaka*, a loud noise, as the report of a gun; *dèsa* and *tèsa*, to be erect; *dòboka* and *tòboka*, to fall, be thrown down.

L and R. These letters are often interchanged, as in *tambòlo* and *tambòro* (prov.), name of an herb; *madilo* and *madiro*, the tamarind tree; *raikitra* and *lètaka* (prov.), sticking to (here again the provincial form is nearer to the Malayan, which is *lekat*); *ringiringy* and *lingilingy*, height; *rdha*, if, is in some parts pronounced *ldha*; and to this head may perhaps be referred the provincial *ròso*, gone, the Hova form of which is *làsa*. *Roso*, however, is also a common Hova word, meaning to go forward, make progress.

S and T. This is an interchange found in other languages, as for instance in Hebrew and Chaldee, the Hebrew *sh* becoming *t* in Chaldee, as Heb. *shor*, an ox, Chal. *tor*; which word Mr. Dahle has shown\* to exist in Malagasy in the name of the month *Adaoro*, which takes its name from the constellation *Taurus*. The examples in Malagasy of this interchange of *s* and *t* are not very common; but I have noticed *tókana* and *sókana*, single, alone; *tèbitèby*, agitation, fear, and *sèbisèby*, confusion, trouble.

F and TS. This, like the interchange of *l* and *d*, occurs constantly, the Hovas preferring the *ts* sound, and the provincials the *t*; thus the Hova *tsidika*, to peep, spy out, is in the provinces *tilika*, with which may also be compared *tily*, a watchman. *Alatsinainy*, Monday, becomes *Tinainy*; *fòtsy*, white, is on the West Coast *fòty* (Malay *putih*, another example of what has been noted above); so too we find *tsihy*, a mat, prov. *tihy*, Malay *tikar*; *tsinjo*, gazed at from a distance, prov. *tinjo*, Malay *tinjow*.

R and TR. These are interchanged in the roots *rànga* and *trànga*, to come into view; *riatra* and *triatra*, torn.

The above changes occur between consonants recognised as possessing well-established affinities; but interchanges often occur between those which are not according to our notions so closely related, as for example between:—

K and P, in *takèlaka* and *tapélaka*, anything flat and wide.

K and F, as in *kòsitra* and *fòsitra*, a kind of insect.

\* ANNUAL I. (Reprint), p. 207.

H and T, as in *haino* and *taino*, to listen, attend.

K and T, as in *korontana* and *korònkana*, confused.

K and TR, as in *òlon-kàfa* and *òlon-tràfa*, another person.

P and T, as in *karèpoka* and *karètoka*, the sound of anything crushed.

J and D, as in *jéjajéja* and *dédadèda*, blazing, flaming.

J and R, as in *jàbajàba* and *ràbaràba*, groping in the dark (comp. *rèpa-rèpa*, *ràparàpa*).

J and RS, as in *jòboka* and *tsòboka*, to be plunged into water (comp. *ròboka*). This last, however, may be resolved into a simple interchange of dentals (*d* and *t*), as *j=ds*.

(3) *Interchange of vowels.* Equal liberty is taken with vowels as with consonants, the change being sometimes accompanied by a slight modification of meaning. Thus we find *ònina*, *ònona*, *ànina*, comforted, assuaged, though *ànina* is more frequently used of the cessation of passion or violent grief. So too with *èntana* (*èntanèntana*), to start upward, and *òntana*, to be startled (*miontana iray hiany ny foko*, used of one violently startled); and again with *sòkatra*, to open, and *sòkitra*, to clear out, pick out from a hole, to carve or engrave; and with *bònabòna* and *bònibòny*, puffiness, unnatural swelling (comp. *bònobòno*); and *bòbaka* swollen, and *bòboka*, saturated. Other examples are *dibadiba* and *dibidiby*, full to excess; *gàgagàga*, *gògogògo*, *gìgìgìgy*, sobbing; *hìnaka* and *tònaka*, to beat (for interchange of *h* and *t* see above); *lafèrana*, *lifèrana*, *lefèrana*, *lofèrana*, the hock; *òfy*, *òfo*, *òfaka*, peeling off (comp. *òvaka*, a chip); *ròritra* and *riritra*, to pull; *risika* and *ròsoka*, to prompt or encourage; *mòimbòina* and *maona*, to gallop, rush.

(4) *Internal strengthening.* This occurs frequently with the labials, and is effected by adding *m* to an existing *v* or *b*. Thus we have *lama*, smooth, *lámaka*, levelled, *lèmaka*, a plain, and *lèmba*, with the same meaning as *lèmaka*. So too we find *àvo*, *àbo*, and *àmbo*, all meaning high; *bàbo* and *bàmbo*, booty; and so too *avèla* and *ambèla*, permitted; *avidy*, *ambidy*, *amidy*, sold, or paid in exchange for something.

It is worthy of remark that though the more correct speakers are quite clear in distinguishing the presence or absence of *m* before *b* or *p*, many of the people seem very careless on this point, and use or omit the *m* in the most arbitrary fashion. Perhaps in no single point is there so much uncertainty among native writers and printers as in the insertion or omission of this *m*, or the *n* similarly used before *d*, *t*, *g*, or *k*.

And now that we have passed thus briefly in review the various modes in which roots are enlarged and modified, we see at a glance how large groups may be formed which have apparently sprung from some one sound, but which have been enlarged or modified, and so made use of for the expression of various shades of meaning more or less closely allied.

Let us for example take the sound *av* (*eb* and *ef* being but variations of the same). From this we get *àvo*, high, *avona* and *évona*, pride, *àfona* and *émbona*, floating (on the surface), *èbo*, boasting, *èfona*, hard breathing, *èfoka*, pride, haughtiness; whether *èvoka*, *àvotra*, *òmbotra*, plucked up (brought to the surface, pulled up?), should also be placed here, is perhaps open to doubt.

We may select as another example the sound *ang* or *aing*, and at once we find a large family springing up around the parent root; e.g. *miainga*,

to rise, to start; *tsinga* (prov.), to lift oneself up (*maninga*); *tsangana*, to stand up; *angana* appears to have the same meaning, compare the common phrase *tsy nasiany niangana* (he left not a single survivor, *lit.* not one standing); *ainginaingina*, *enginèngina*, to be placed on high; *aingitraingitra*, *éngitrèngitra*, to be restless (as if constantly moving up and down?); *aingiaingy*, pride, arrogance; *angitràngitra*, *angatràngatra*, haughtiness, wanton gaiety; *angvàngo*, piled up in a heap; *taingina*, perched on something.

Or take again the word *mibébaka*, now used among Christians to express repentance; and supposing the crude form to be *bab*, *beb*, we get at once *mibàboka*, *mibébaka*, to supplicate, to repent, with which it is quite possible *vàvaka*, prayer, and *vàmbaka* (prov.), confession, are connected. It may even be that *vàva*, mouth, offers the key of the whole group, prayer being regarded as *par excellence* the service rendered by the mouth.

*Rera* is another root of some interest. It is not used in its simple form, but appears in several secondary roots, which show that slackness is its primary idea: *baréra*, to droop, drag, hang loose; *boréra*, worn loose, then weak, infirm; *garéra*, feeble, imbecile; *rèraka*, loosened, weak, faint; *borèraka*, loose, untidy.

As a final example\* let us take the stem *hav* (*hev*, *heb*, *hef*), from which we get *hàvihàvy*, *hèvihèvy*, *hèvingèvina*, to be suspended, to oscillate; so too *hèvahèva*, *hèvihèvy*, *hèbihèby*, *hèbikèbika*, *hèvitrevitra*, *hèfahèfa*, *hèvikèvika*, all with various shades of the same meaning; so too *hèmbahèmba*, *hèmpahèmpa*, to flutter (as a flag); *hèvochèvo*, to loiter; *hèfika*, *kèfika*, to wag the head.

These examples are sufficient to indicate a way of comparing and classifying roots, which will often prove instructive by throwing new and unexpected light upon familiar words, and by leading us to the idea that lay originally at the base of the conception they now embody. I cannot expect that any large number of the readers of the *ANNUAL* will be interested in a paper of this character, but hope it may be a stimulus to the few who are not content with our present knowledge of the Malagasy language, but are always seeking to render that knowledge fuller and more exact. How much remains to be done, and in how many departments our knowledge is but fragmentary, we must many of us feel. But by combined efforts, each one trying to add something to the common stock, we may do much towards the attainment of fuller and more exact knowledge. Only by a much wider acquaintance with the dialects (their vocabulary, and peculiarities of structure and idiom), and by a well-established collection of words not yet entered in the Dictionary, and by a large and comprehensive study of families of roots, such as I have endeavoured to indicate in this paper, can this much-to-be-desired end be attained; and as my contribution, I hereby offer this paper to the readers of the *ANNUAL*.

WILLIAM E. COUSINS.

\* I had noted other examples, but will only suggest them briefly in a note: -- *Engoka* (*engo*), *baraingo*, *faraingo*, etc. *Bihika*, *bolitika*, *boritika*, *bolitika*. *Vitivety*, *vetivetika*, etc. *Tohika*, *bohika*, *bohiky*, *bohika*. *Diditra*, *vadiditra*, *hodidina*, etc.

## ON THE POETRY OF MADAGASCAR.\*

[COMMUNICATED by C. Telfair, Esq., President of the Mauritius Nat. Hist. Soc.]

THE most prominent characteristic of the Malagasy language, in reference to poetry, is a total averseness to rhyme.<sup>very little</sup> Whilst it is admitted that the same identical sound is not legitimate rhyme, the extreme paucity of the language in terminations will ever preclude the introduction of rhyming verses. At least nineteen-twentieths of the whole vocabulary of words terminate in *a* or *y*, and an immense proportion of these in *na* and *ny*:—all other words terminate in *e*, or *o*, or the diphthongs *ay* and *ao*; and even these are exceedingly monotonous in the consonants of their penultimate and ultimate syllables. The best couplet I recollect to have heard has the rhyme of *hoe* and *me*, answering exactly to the English words 'way' and 'may,' and the jingle of such a rhyme has in the Malagasy language an unnatural and harsh effect. In the genuine native verses I have not met with any such instance as the one specified, but have observed that rhyme of every description seems naturally from the true genius of the language, and intentionally from the uncouthness of its effect, inadmissible.

So far I have ventured to assert with confidence, and without any apprehension of future observation disproving my opinions; but when the question arises, What then constitutes poetry or versification in Malagasy? I am conscious that uncertainty and error may very possibly attach to the opinions I shall present in reply. Future observation, combined with a more adequate knowledge of the subject, may disprove my present opinion, and substantiate what I at present reject as destitute of proof. I make these remarks as introductory to the opinion that *quantity* (except so far as quantity and the

\* I am indebted for this paper to the kindness of my friend Dr. R. Rost, Ph.D., Librarian to the India Office. Dr. Rost discovered it in the first volume of the *Journal of the Bengal Asiatic Society*, for 1832, and kindly cut out the leaves containing it from his copy in order that it might be reprinted in the ANNUAL, thinking, very truly, that it would be of interest to many. Mr. Baker, as will be remembered by some readers, was Superintendent of the Press of the London Missionary Society in Antananarivo during the early mission of that Society in Madagascar (Oct. 1828—June 1832, and July 1834—July 1836), and was, together with the Rev. D. Johns, the last English missionary to leave the island before the outbreak of persecution. Mr. Baker died only last year (see ANNUAL NO. IX., p. 121); but this paper was written by him during his first visit to England, more than 54 years ago. We have reprinted it exactly as given in the original, with the old-fashioned style of writing Malagasy, only correcting some obvious errors in spelling and punctuation, as well as that of calling Rabodonandrianampoina 'Prince,' instead of 'Princess,' as it should of course be given. It will be known to many that this was the name by which Queen Rānavālonā I. was generally designated in public proceedings.—ED. (J.S.)

number of syllables and accents may be regarded as necessarily synonymous) furnishes no rule for measuring Malagasy verses. No examples have come to my knowledge of lines having a credible claim to correctness, in which two apparently short syllables of one line are put to correspond with one long syllable of an equivalent line; but, where the number of syllables in a line exceeds those of a corresponding line, the metre is preserved by cutting off some syllables, and thence gliding two into one reading; and by lengthening the half syllables of verbal terminations into perfect syllables.

Every word in the language is strongly marked by one accent or more, corresponding in this respect with English. But in English it is observable that the accent, falling on the vowel, leaves the syllable short. I do not observe any similar distinction in Malagasy, excepting that there are a few words terminating in *e* long, and thence carrying the accent. Probably in Malagasy the accented syllable is universally long, and the long syllable universally accented.

Granting the Malagasy verses to be divisible into feet and capable of being scanned, there is perhaps no instance to be found of a line corresponding with a line in Latin. In Latin, the number of syllables varies, and the last is deemed long; the reverse of these two cases is the fact with regard to Malagasy. Moreover the feet constituting a line seem to have no correspondence with the purest metres in Latin. Thus the most harmonious lines in Malagasy coincide syllable for syllable and accent for accent with the following:

"Tsy hitanao va ny mâtý	Dost thou not see the dead
Maraina tsy mba mamandro,"	Morning not warm at the fireside,

consisting of an amphibrach, trochee, and amphibrach. These the natives regard as the most harmonious lines; yet there are in the same ode lines quite different in respect to the situation of the accented syllables; as in the following couplet:

"Tsy mahalála hávan ko tóna	Not knowing what kindred shall come
Aiza ny òlona irény,"	Where are people <i>as</i> these?

lines which, notwithstanding their diversity, do not appear essentially destitute of harmony.

These lines have more similarity to English, so far as that a certain uniformity of syllable and accent is essential in both languages; and the harmony of the verse arises from the accentuation and the *cæsura*. The latter seems plainly discernible in Malagasy, as in this line:

"Vavahady hidirana—misy hiány"  
(A door of entrance—that there is).

Yet the verses are unlike to English in respect to their being destitute of rhyme, unaccented on the last syllable of a line, and scarcely if ever permitting one line to run on in a continuous sense into another.

The characters peculiarly essential to Malagasy versification seem to be chiefly the following: (1) Harmony of syllables and accentuation; a deviation from which rule produces a precisely similar harsh discordant effect on the ear as in English. (2) The expression must be diversified, and the words transposed, as in other languages. (3) Every line must be in some degree an independent sentiment, or at least a clause of a sentence, bearing a natural division in the sense, and thence a pause of the voice in reading or singing. Hence the sense is often strikingly abrupt and laconic, as will be seen in the examples of literal translation.

The language abounds much in polysyllables; there are exceedingly few monosyllables, and perhaps the greatest proportion of the words are of five syllables. Hence a line of eight syllables generally contains from two to five words, and a line of twelve is frequently comprised in four words. On this account a sentiment is rarely attempted to be set off with superfluous ornaments of language, but stands entirely on the merit of the figure under which it is conveyed. Of poetical adjectives, so often highly convenient in English for filling up the metre or adorning a graceless noun, scarcely an instance occurs in an entire song. Yet the language, thought, and style of the poetry is quite of a different cast from prose. Abounding in the boldest figures, and the sense left to connect itself by the chain of thought, it commends itself to the mind as the rude and unpolished offspring of poetical genius.

It is evident that in a language so exceedingly different from English, combined with a state of society equally different, it is impossible, on the one hand, to give an intelligible literal translation, leaving the reader's imagination to fill up the images; and, on the other hand, it is difficult to give a vivid imitation of the original. For myself, I pretend not to any talent in poetical composition, and am induced to make the attempt merely by the novelty of the subject, until some more able pen shall display in language more worthy of its subject the gleanings of orally preserved versification to be found in Madagascar. In the mean time, I have only to plead for all deficiencies, that I am not setting forth myself as an author, but only as a translator, and that from a language wherein nothing can be looked for rising above mediocrity in the estimation of cultivated minds. I shall be abundantly requited for my trouble, should these



contributions tend in any measure towards evincing that the native inhabitants of Madagascar, degraded as they actually appear, especially when contrasted with the enlightened population of civilized Europe, are nevertheless not destitute of natural genius, nor by any means insensible to the finer feelings and passions of human nature.

I ought not to conclude without observing, that there is a kind of composition very prevalent in the language which is neither perfect prose nor poetry, but seems to form a connecting link between the two, being both in sentiment and expression more pithy, figurative, and smart than the former, and yet destitute of the metre, cadence, etc. of the latter. These pieces may be called poetical prose. A prose translation of such fugitive examples as have fallen into my hands would be dull and unstriking, and a *literal* rhyming translation impossible; so I have chosen, in the accompanying example "On Courtship," a translation pretty free in expression, but I believe perfectly correct, though somewhat paraphrased, in thought.\*

It appears, as far as I have discovered, that all compositions in Malagasy, of a poetical turn of thought, are written in this style, except songs; the latter being the only compositions I have yet met with evidently written in regular metre.

The following, as well as several succeeding songs, are by a man called Razafilahy, who, happening to be a cripple and unable to work, turned his attention to song-making, by which it is said he obtains a tolerable livelihood. He is a stoutish man, rides out on the back of a male slave, and has as buxom and merry looking a face as any to be seen in Madagascar.†

#### NOTE.

[WHILE giving Mr. Baker's interesting paper unaltered, it may perhaps be well to remark that later acquaintance with the capabilities of the Malagasy language has not altogether borne out his opinion, in the first paragraph of the article, that rhymed verse is impracticable in Malagasy, still less that rhythmical verse is so. The subject is, however, more fully treated in the article on "Malagasy Hymnology," a few pages further on in this number. See also Mr. Richardson's article on "Malagasy 'Tononkira' and Hymnology" in ANNUAL No. II., pp. 23—35. Many specimens of native songs are given in Mr. Dahle's *Specimens of Malagasy Folk-lore* and in the *Publications of the Malagasy Folk-lore Society*, and translations of many are given in the *Folk-lore Record*, vol. i., 1883.—ED. (J.S.)]

\* We are inclined to differ in opinion with our author on this subject, and to think that a mere literal translation, with explanatory notes, would have better illustrated the peculiarities of thought and idiom in the Malagasy language, than even the best versified imitation.—ED. [JOUR. BENG. ASIAT. SOC.]

† As more convenient for the generality of our readers, whom we may safely presume to be unacquainted with the Malagasy language, we have arranged the original text at the foot of the page, leaving the English version uninterrupted.—ED. [J.B.A.S.]

I.—*Literal translation of an Ode in praise of the Princess Rabodo.*

By Razafilahy.

Long, long, may live	The corners of the houses guns.
Rabodonandrianampoina.	Endrehinantsiva is his portioned land,
To the south of Ambatondrafandana,*	Endrehinantsiva his house ;
To the north of Ambohimitsimbina,*	Possessing much, yet not haughty.
To the west of Ambohimiandra,*	Orphans shall then be plump,
To the east of Ambohijannahary ;*	Their mother living, they are well fed.
The new moon shining in the west,	Yonder is the defence of rock,
The full moon rising in the east.	Yonder the clothing of wood, [men.
Long live Rabodo,	A fence of spears, yea, second fence of
Yea Rambôasalama,	Long live Rabodonandrianampoina,
And Rakotoschêno of Radama,	A single tree in a lake ;
And his relations all,	It is not "How many reign ?"
Innumerable they ;	For <i>there</i> is our only sovereign.
The portions of land shall then be dol-	

The following is the translation of another Ode by the same author :—

II.—*The Great River.*

Yonder Ambaniâla's† streams go forth,  
 Ambôhidrapêto† to the north extends,  
 To the northward also Ambôhitrimanjaka ;†  
 †Guide well thy winding course,  
 Nor kill the people's sons with heedless might.  
 Too full, thou'rt like an ill cut cloak,  
 Smothering the head it should set off ;  
 Dried up, thou'rt like an insufficient dress,  
 Leaving the breast and arms naked.

I.—*Ode in praise of Princess Rabodo.*

Hono re ny veloma	Ny zoro n'trano dia basy.
Rabodonandrianampoina :	Endrehinantsiva ny tokotany ny,
Atsimo n' Ambatondrafandana,	Endrehinantsiva ny trano ny ;
Avaratry ny Ambohimitsimbina,	Manambe tsy 'mba miavona.
Andrefana Ambohimiandra,	Kamboty dia dongadonga,
Atsinanana Ambohijannahary ;	Velon' drengy dia botrabotra.
Volana tsinana ny avy andrefana,	Ao ny miaketso vato,
Feno manana ny avy atsinanana.	Ao ny miakanjo hazo,
Veloma Rabodo,	Rova lefona, ka temitr' olona indray.
Sy Rambôasalama,	Veloma Rabodonandrianampoina,
Sy Rakotosehenon-dRadama,	Hazo tokana an-ony ;
Sy ny havany tontolo,	Tsy firy no mandidy,
Tsy tambo isaina ;	Ka tompo nay any ao.
Ny tokotany dia farantsa,	

II.—*Anonibe.*

Indro ny rano Ambaniâla,	Mahaiza mizotra,
Avaratr' Ambôhidrapeto,	Aza mamono zana' bahoaka.
Avaratr' Ambôhitrimanjaka ;	Tondraka, toa misaron' doha ;
Mahaiza mandeha,	Ritra, toa manao sikimbalaka.

\* These are names of different parts of the hill on which Antananarivo is built, or of hills on either side of it, and situated respectively south, north, west, and east of the Palace.—EDS.

† This and others are names of villages lying on the banks of the river.

‡ The whole beauty of the poem lies in a hidden allusion running through it to the king-dam ; here perhaps is an admonition to the sovereign.

And thus from day to day  
 Thou rollest onwards continually.  
 Soon at Ikiopa are thy waters found,  
 Ikiopa renowned through the world,  
 Devouring all, yet still unsatiated,\*  
 Lab'ring ever, and still thy work unaccomplished ;  
 Ambôhiboânjo from thy bank not far,  
 And southward Soâvinimérina ;  
 Behold Antônta abounding in eels,  
 † From whence murmuring sounds are heard ;  
 The soldier here casts round his wandering eye  
 Thinking of distant friends.  
 Here thou art in jeopardy, new-wedded bride,  
 Should a dispute arise towards the evening ;  
 For caprice controls the unsettled heart ;  
 Discarded, thou wilt soon retrace thy steps !  
 But we again pursue the river's course.  
 At Fârahantsana next abide ;  
 The people there with noisy long guns fire, ‡  
 And cannons longer and still more noisy,  
 Spitting the frothy foam and rising phlegm,  
 Writhing in restless agony and pain.§  
 Let each unwept forsake his best beloved !  
 For all partake the bitter curse.||

III.—*Paraphrase of a poem called Ny Momba, or 'The Barren.'* By  
 the same Author.

I To thee who dost all childless live,  
 Thou, barren, this advice I give :  
 In place secure thy wealth with foresight lay ;  
 For then a thousand tongues thou'lt find to say,  
 "Kind father, dearest mother, thou to me ;"

Ka ny azy re toetr' andro ny  
 Ka mivalambalan' indray  
 Koa mankany Ikiopa,  
 Ikiopa rano malaza,  
 Homambe, fa tsy voky,  
 Mivalambalan' indray ;  
 Mivalana dia any Ambohiboanjo,  
 Any atsimo ny Soavinimérina ;  
 Indro koa re any Antonta,  
 Ka migodongodom' piteny ;  
 Mahita anay lavi'kavana

Miady mena masoandro,  
 Ka tsy fantatr' ompanavao,  
 Tsy vatra n' olona tsy honina.  
 Izahay re dia handeha,  
 Ka tonga tany Ifarahantsana ;  
 Ka ny ao mipoa' basy lava,  
 Ny ao mipoa' tafondro lava,  
 Mitsipidrorana mivalana.  
 Mamoiza ny mana' malala !  
 Fa samy efa nozoi' ny.

III.—*Ny Momba.*

I Izany Rakala momba,  
 Tehirizo tsara ny harena ;  
 Fa raha misy ireny,

Atao ny hoe, ikiaky nao, ineny ;  
 Tsy mahalavitra ny tany,  
 Tsy mahasasa' mandeha.

\* All other streams run into Ikiopa.

† That is, the sound of the distant waterfall, and by allusion, the repining of the soldiers going to war.

‡ Literally true of the Sakaláva enemy and, figuratively, of the waterfall Ifarahantsana.

§ Under the figure of the dashing of the water, alluding to the death of soldiers through war, fever, and famine.

|| Every family has lost some relations in the devastating wars, and all must submit without repining.

No space their coming stays,  
 No rugged road delays.  
 But if thou pine in wretched poverty,  
     Not thine gay robes to wear,  
     No flattery soothes thine ear,  
 No prattling babes entwine,  
 No equal portion thine.

2 The barren destitute of wealthy store,  
 Extends her wandering eyes the wide world o'er ;  
 No loving friend to visit her is found,  
 No children, prattling all their wants, surround.  
     If hungry, none a scanty dole shall mete ;  
     If satiate, none the falling crumbs shall eat ;  
 By none thy sufferings are allayed,  
 If weary, none shall give thee aid ;  
 And, hapless, even when thou'rt dead,  
 No tears shall weep o'er thy last bed.

3 Thy shroud not half a dollar buys,  
 Nor sixpence sheep for sacrifice.  
 A penny pays for grease to light  
     Instead of taper thy sad ghost ;  
 No friends shall watch the dreary night ;  
 To shallow grave shalt thou be hurried,  
 And with regardless haste be buried,  
 A farthing all the funeral cost.  
 "Ah ! mother, life is misery."  
 Yea, barren, such thy fate must be ;  
 Thou'lt fain the locust\* catch, for whom ?  
 For children of a luckier womb,  
 Yea, such, ill-fated barren, is thy doom.

4 Now, barren, view thy husband dead,  
 And thou from parent's distant bed ;  
 From head to foot sorrow's own image thou,  
 Unheard by all, thy sad bewailings now.  
 Ah ! barren, thou in former days,  
     A father living,  
     A mother giving,

Fa raha tsy manana ireny,

Lany haingio,  
 Lany laingia,  
 Lany zanaka,  
 Lany zara.

2 Momba lany harena,  
 Ny maso no apitrapitra ;  
 Tsy misy havan' kamangy,  
 Tsy misy zaza hitomany.

Noana, tsy manan' kangatahana ;  
 Voky, tsy manan' kotolorana ;  
 Marary, tsy manan' kitsabo,  
 Sasatra, tsy manan' kitsetra ;  
 Eny, Ramomba,  
 Maty, tsy manan' kitomany.

3 Vitan' damban' doso,  
 Vitan' ondry n' talkiajy ;  
 Vitan' tsabora mila voamena,  
 Atao ny lavenan' tandrevaka.

Tsy misy mpiaritory,  
 Ialany ny olo kajia.  
 Maty re aho, raneny.  
 Izany Rakala momba ;  
 Misambo' balala  
 Ho an' janak' olona ;  
 Eny Ramomba.

4 Rakala momba, momba ka maty vady,  
 Ka lavi' dray aman' dreny ;  
 Sady an-doha no an-tongotra,  
 Miantso ka tsy fanta' ny.

\* The poor among the people eat the locusts and feed their children with them.

Could'st bathe in water fetch'd by slaves,  
 Caressed and blest in all thy ways.  
 Ah ! barren, now how chang'd thy state,  
     Thy father's life-dream o'er,  
     Thy mother now no more,  
 To bathe in tears thy wretched fate,  
 All cloth'd in rags, thou once might'st hate.  
 Link'd to some churl, I see in piteous plight  
 Thee pinch'd and waken'd at the morning light ;  
 Expelled the cheering hearth, thy wedded right.  
     "Ah, mother ! life is misery ;  
     Would I had died in infancy !"

- 5 I travelled eastward succour to obtain ;  
     My father's kindred live hard by ;  
 Alas ! I'm chang'd ; they know me not again ;  
     Ah, mother ! like the dead am I.  
 I turn'd my steps into the northern way ;  
     My mother's kindred live hard by ;  
 Alas ! I'm chang'd ; thou'rt not the same, they say ;  
     Ah, mother ! like the dead am I.  
 I turn'd me back again, and southward ranged ;  
     My father's sister lives hard by ;  
 But she, like all my relatives, is changed ;  
     Ah, mother ! worse than dead am I.  
 I turn'd again a westward course to tread ;  
     Tis there my mother's sisters live ;  
 Their dead relation's awful blame they dread,  
 So careless pitch the boon they give !

IV.—*Paraphrase of an Eclogue in Poetical Prose.*—Author unknown.  
*On Courtship.*

<i>She.</i>	<i>He.</i>
Pray tell me, since you oft profess	Rice, which affords our daily food,
Your fervent love to me,	And constant life supplies,
To what, if we may give a guess,	Is the best emblem of my love,
Your love may liken'd be ?	Which never, never dies.

Ray bado, ray bado ; Fahavelon' dro ray ny, Fahavelon' dro reny ; Mandro rano antsakaina ; Raha mivoaka, tambatambazana. Ray bado, ray bado ; Raha maty ro ray ny, Raha maty ro reny, Mandro rano maso, Mitafy lamba tseroka, Mitoetra amy ny olona ny bado, Mandry maraina, rongadrongati' ny, Mamindro, atositosi' ny sasany. Maty aho, ry neny, Tsy maty fony kely.	5 Nony nankaroa atsinanana aho ; Havan' dry kiaky no ao. Nodiany ny olona tsy fantatra aho, Maty aho ry neny. Nony nankao avaratr' aho ; Havan' dry neny no ao, Nova' ny ny olon' kafa ; Maty aho ry neny. Nony nankao atsimo aho ; Zanak' olomianadahy no ao, Nova' ny fahatelo be ; Maty aho ry neny. Nony nankao andrefan' aho ; Zanak' olona mirahavavy no ao : Ny tao no nanipy kely, Fa matahotra ny tsiny ny maty.
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IV.—*On Courtship.*

Tia nao tahaky n'inona angaha aho ? Tia ko tahaky ny vary hianao.—Tsy tia nao aho izany, fa atao nao famonjy fo raha noana. Tia nao tahaky n'inona angaha aho ? Tia ko tahaky ny rano hianao.—Tsy tia nao izany aho, fa atao nao fitia momba tseroka. Tia nao

*She.*

Ah no! not so thy love to me,  
 For that thou deemest sweet,  
 Only when hunger presses thee  
 To take the proffer'd meat.  
 Then tell me, since you oft profess  
 Your, etc. (as in the first verse.)

*He.*

I love you as the fountain pure,  
 Which yields a sure supply  
 Of that without whose aid secure  
 My frame would quickly die.

*She.*

Ah no! not so thy love to me,  
 For that, when dirt adheres  
 Which others scornfully may see,  
 Desirable appears.  
 Then tell me, etc.

*He.*

The *lamba*,\* which around I fold  
 To guard life's vital flame,  
 Is that which, next to thee, I hold  
 Most needful to my frame.

*She.*

Ah no! for that, when older grown,  
 Disdain'd, thou wilt reject;  
 And ne'er again will it be known,  
 But lie in long neglect.  
 Then tell me, etc.

*He.*

I love thee like the luscious taste  
 Of a new honeycomb, [haste,  
 Whose precious fruit is seized with  
 And borne in triumph home.

*She.*

Ah no! for there amidst the sweets,  
 Though luscious they be found,  
 The goodness not unmingled meets,  
 But dregs impure abound.  
 Then tell me, etc.

*He.*

I love thee as the sov'reign king  
 Of this our native land,  
 Whose endless praises all can sing,  
 Whose word moves every hand.

*She.*

To this, in truth, thy love compare,  
 Whose merely passing by,  
 Rebuking every vulgar stare,  
 Abashes every eye.  
 To him, indeed, thy love compare,  
 Whose briefest, transient gaze,  
 With shame o'erwhelms and deep des-  
 Or drooping hearts can raise. [pair,  
 To this, indeed, thy love compare,  
 I, of desire the end  
 And goal; wherever you repair,  
 Still towards me you tend.  
 And I my love to thee will prove  
 In all good faith and truth,  
 A filial daughter's tender love  
 To parents of her youth;  
 Enjoying life, while life shall last,  
 One house our common home;  
 And when the mortal scene is past,  
 United in one tomb!

E. BAKER.

tahaky n'inona ary aho? Tia ko tahaky ny lamba hianao.—Tsy tia nao aho izany, fa raha tonta, afindra nao ka tsy tsarao nao intsony. Tia nao tahaky n'inona angaha aho? Tia ko tahaky ny tantely hianao.—Tsy tia nao aho izany, fa misy faikana. Tia nao tahaky n'inona angaha aho? Tia ko tahaky ny Andriamanjaka hianao.—Tia nao tokoa aho izany, mandalo mahamena' maso, mijery mahamenatra. Tia nao tokoa aho izany, fa tapi' java' nirina aho, tapi' java' naleha. Tia ko tahaky ny kiaky sy neny hianao: velona, iray trano; maty, iray hazo.

## POSTSCRIPT.

[It may perhaps be well to give, as *addenda* to the foregoing, another specimen or two of Malagasy poetry as translated by Mr. Baker, especially as the books containing them are somewhat scarce, and the pieces may not be known to many readers of the ANNUAL. The first is taken from Mr. Ellis's valuable *History of Madagascar*, vol. i., p. 276; it is by the same native bard who wrote some of the foregoing pieces, Razafilahy.—EDS.]

\* The garment which a Malagasy wraps round his body, and which constitutes his only clothing except what is wrapped round the loins, and without which he is called naked.

*A Song concerning the Dead.*

- 1 Vain man ! observ'st thou not the dead ?  
The morning warmth from them has fled,  
Their mid-day joy and toil are o'er,  
Though near, they meet fond friends no more.  
A gate of entrance to the tomb we see,  
But a departure thence there ne'er will be.  
But where's his dearest friend's reply ?  
Ah ! where are those thus doom'd to die ?
- 2 Vain man ! observ'st thou not the dead ?  
Sweet words forsake their dreary bed ;  
There's none the mould'ring silk\* around his fellow folds,  
Or north or south again their visits gay beholds ;  
Then shall re-echoing vales no longer cheer,  
For them the hill no lofty signals rear.  
Their shrouded heads unmoving lie,  
Unknown the friends that o'er them sigh ;  
Ah ! where are those thus doom'd to die ?
- 3 Vain man ! observ'st thou not the dead ?  
No more their homeward path they tread.  
The freeman lost may ransom'd be,  
By silver's magic power set free ;  
But who those lost from death can buy ?  
Ah ! where are those thus doom'd to die ?  
Let me prefer true goodness to attain,  
Or fool or wise I'm deem'd by transient fame.  
New rice, my friends, your cheerful blessing, give,  
So from Razafilahy you shall thanks receive.

The second piece is included in Mr. Baker's little work entitled *An Outline of a Grammar of the Madagascar Language, as spoken by the Hovas* (London : 1864), and is given at the end as a translation of one of the specimens of native composition :—

*Exhortation to Friendship.*

- 1 Let the living love each other ; for the others (the dead) cannot attain it ; for the others are gone home.
- 2 Let the living love each other ; for the dead are not companions ; for the dead belong to the dead, the living belong to the living ; for the dead cannot be hoped for, but the living can be hoped for.
- 3 Let the living love each other ; for the kind-hearted attain (life's) end ; people love what touches the heart ; and remorse does not come before (the deed), but after ; and it is you (O men) who shall be full of remorse, who, angry, give up your heart (to vengeance) ; but for us, we suffer no remorse ; when angry, we can be pacified, for vengeance which gets the mastery becomes a parent of much guilt.
- 4 Let the living love each other ; and do not build two houses too distant ; for the distant (neighbour) cannot be called in, but the near will be preferred, and the many (together) are happy ; for ants consume a small store.
- 5 Let the living love each other ; do like the locusts : when fat, they fly off together.

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\* Malagasy corpses are wrapped in silk cloths.

- 6 Let the living love each other; do as the carded cotton: though tender, not broken; though spun out thin, not snapped; and be as water in sandy ground: you think there is none, but there is.
- 7 Let the living love each other; do as in yonder market: the unknown is easily recognized, and the unseen discovered; uncalled by proclamation, they assemble.
- 8 Let the living love each other; be as the cock's (feathered) garment: the well-arranged (feathers) are replaced; from the corpse only are they separated.
- 9 Let the living love each other; but do not make the bullock's friendship: the big one push away the small, and the fat thrust away the lean.
- 10 Let the living love each other; but do not make the friendship of the rock: when angry, it cannot be appeased; when broken, it cannot be mended; the big ones never speak, nor do the little ones grow.
- 11 Let the living love each other; but be not like the rush *harifo*: smooth outwardly, but hollow within.
- 12 Let the living love each other; but make not the water's friendship: when its companion comes, it gets muddy; the advance guard does not call out, "Come on," and the rear does not cry out, "Stop for me," but when they do mix, they become the muddier.



## THE TRADE AND COMMERCE OF MADAGASCAR.\*

TRADE in Madagascar eludes statistics. Now and then upon the coast, when a vessel arrives with a cargo of some much-needed foreign product, the agents of the firm to which the goods are consigned may be seen doing business undisguisedly with a crowd of native wholesale buyers around them, each man anxious to be the first to strike a favourable bargain and hurry his stock up to the roadside markets of Imèrina; but here in the Capital the European trader receives his merchandise from abroad, and collects the native produce in return, without anybody, except himself, knowing correctly how much passes through his hands either way. He studiously endeavours to prevent the circulation of such knowledge, especially amongst his native customers. The alternations of scarcity and abundant stock can generally be ascertained by observing the fluctuation of price in the great weekly market of Antananarivo, the Hova being a keen dealer and ever ready to take advantage of the accidents of supply and demand; but beyond prices, information is very indefinite. Such records are kept by the duty which

\* This paper is taken from an English Blue-book for 1885, and consists of a Report on the trade of this country from W. C. Pickersgill, Esq., H. B. M.'s Vice-Consul for Antananarivo.—EDS.



is regularly taken at the ports, but by officials whose salaries consist chiefly of perquisites and pickings; and, naturally enough, their accounts are not remarkable for clearness.

Before the present difficulty with France broke into actual hostilities it was feared that an attack upon the island would at once destroy all foreign trade. There were not many persons who gave the native Government credit for strength enough to provide at one and the same time an armed resistance to its enemies and a peaceable protection for its friends. Such protection, however, has not been wanting, and although during the first six months of blockaded ports and indiscriminate bombardments there was something like a total collapse of business, the year which has just ended has been not altogether an unprofitable one to the few whose acquaintance with the country and its inhabitants enabled them to foresee how little the roar of cannon upon certain parts of the coast would affect the daily wants of the populous interior. The island is far too large for complete blockade, and the attempts which have been made to coerce the Malagasy into submission by closing three or four well-known points of entrance have only resulted in the opening of other channels of communication.

According to the estimates of persons engaged in Madagascar trade, the total amount of business done in the country during the year 1884 has been about one-third of what was done during the year immediately preceding the outbreak of war. Of that amount the greater part has been accomplished through British enterprise. Contrary to expectation, the American firms were for some time apparently afraid to run the slightest new risk, notwithstanding their being much better equipped for hazardous trade than any of their rivals. An interesting illustrative case is recorded of a British house clearing, it is said, not less than £3,000 on a quantity of cotton goods which had already been landed and stored in an American warehouse at one of the ports occupied by the French. They were re-shipped, distributed at various places still unblockaded, and put into the then thirsty inland markets just at the lucky moment. On these goods the Malagasy Government received double duty, the original landing having been made before the French obtained possession of the port at which it took place. Since then many importations have similarly paid duty twice—once at Tamatave, and then again on being landed elsewhere.

In addition to the obstacles encountered in getting foreign goods into the country, there has been even greater difficulty in getting native products out of it. Pleading the necessity of employing every means within its power to harass an enemy of overwhelmingly superior strength, the Malagasy Government declared itself perfectly justified in prohibiting all exportations, and for some time carried the declaration into effect. Further deliberations, however, led to the restriction being confined to articles of food only; and a later revision of policy, pressed for by Her Majesty's Consul and myself, brought about the removal of sugar and coffee from the prohibited list. Thus trade in this country has been working in shackles, and only the strong and well-acclimatised firms have been able to bear up under the strain.

## THE TRADE AND COMMERCE OF MADAGASCAR. 179

With due regard to such observations on the impossibility of procuring exact information as have already been made, the trade of Antananarivo and the province of Imerina\* for the year 1884 may be noted as follows :—

IMPORTS.			EXPORTS.			
Articles.	Bales.	Value.	Articles.		Quantity.	Value.
Cotton sheetings	2,800	£ 64,400	Hides. . . .	Number.	230,000	£ 172,300
White shirtings.	1,500	30,000	Coffee. . . .	Lbs. . . .	60,000	480
Prints, etc. . . . .	....	20,000	Wax . . . .	„ . . . .	80,000	1,280
Various . . . . .	....	3,000	Various. . . . .	.....	.....	1,000
		122,400				175,060

The cotton sheetings are for the most part of American manufacture. English imitations are sometimes imported, but their inferiority is easily detected, and they do not find a ready market. It is a great mistake to think of the Malagasy of Imerina as burning in tropical heat, with only a few shreds of muslin upon them for the sake of decency. They look for warmth and durability in their garments, and up to a certain limit will always pay a good price for such articles as possess these qualities. When the cold east wind of the dry season is blowing, many of them find even stout American sheetings too thin for comfort, and there is then a certain demand for woollen goods. Flannels, blankets, and tweeds, however, should be imported very cautiously, as there is the greatest difficulty in preserving such things from the ravages of insects.\*

*Printed Calicos* sell in all parts of Madagascar, but it is not easy to hit the native taste in patterns, which is very reluctant to be guided by the fashions of Europe. Moreover, the kind of print which is acceptable in the eyes of one tribe is often the very opposite elsewhere.

Amongst other articles more or less in constant demand in Antananarivo and the neighbourhood are iron cooking-pots, iron kettles, sauce-pans and frying-pans, sheet tin and soldering materials, and glass and putty. Tinware is largely used, but it is not profitable to introduce the articles ready made. Of carpenters' tools the only kinds which the native smiths do not forge to the satisfaction of those who use them, are saws and chisels, the cutters of planes, gouges, augers, braces and bits.

*Second-hand Clothing* frequently sells well, especially if the quality is good, and the signs of previous wear not too evident.

*Boots and Shoes* are manufactured in the country. Importations, however, find a market when they are of a superior make and are offered at reasonable prices.

*Umbrellas and Sunshades* also meet with ready sale.

*Crockery* is in daily use by almost everybody. The richer people will

\* Before the commencement of the Franco-Malagasy war, I was informed by Samuel Procter, Esq., Her Malagasy Majesty's Consul in England and principal of the oldest English mercantile firm in Madagascar, that in his opinion the total export and import trade of the whole island could not be of much less value than one million pounds annually.—ED. (J.S.)

sometimes buy full services of china, but high-priced goods should be introduced in very small quantities.

*Drugs* often fetch very good prices. Those most frequently required by the natives are : quinine, epsom-salts, iodide of potassium, bichloride of mercury, santonine, cod-liver oil, carbonate of soda, tartaric acid, seidlitz powders, etc.

*Stationery* is needed by a constantly increasing number. The market is chiefly supplied by the missionary printing offices, which have the privilege of importing such materials of instruction free of duty. The slates required to meet the wants of upwards of a quarter of a million children registered as scholars in the various schools, and the Bibles, New Testaments, and hymn and prayer-books, etc., which are purchased by them and the adult adherents of over 1,500 churches and congregations scattered throughout the island, form no inconsiderable item of general trade. It is not customary to mention such things in a commercial report, but every new demand for paper and printing and book-binding materials must necessarily benefit the firms which produce them.

It should always be remembered that every article of merchandise offered for sale in the interior of Madagascar has to be carried hither from the coast on human shoulders. Packages which cannot be broken up and re-arranged at the port of landing should therefore be made up in certain weights. One man will carry two packages of from 40 to 45 lbs. each, but the same weight in a single bale will require two men, and the expense of transit will be doubled. Large packages and heavy packing materials often increase the cost of imported goods enormously. It is impossible to pay too much attention to this matter. The wages received by the porters vary according to the distance travelled, and sometimes according to the weight carried. For a journey from one of the nearer eastern ports, Tamatave, Vatomandry, or Mahandro, to the Capital, with an ordinary load, they receive 10 shillings per man. It is usual to divide a number of them into gangs of 10, 15, or 20 men, and appoint to each gang a trustworthy overseer, who carries the way-bill and a portion of the wages set apart for the purchase of food on the road. The pay of this extra man adds from 8*d.* to 1*s.* to the carriage of every load. On the imports and exports of Antananarivo during the year 1884, which together amount to about £ 300,000, the cost of transmission to and from the coast is estimated at not less than £ 11,000.

The coinage used in Madagascar is the French 5 franc-piece. No other form of money will enable the European trader to do business directly with the natives. It is reckoned in all small transactions as equivalent to four English shillings, or an American dollar. Against bills on London it is worth from 3 to 5 per cent. As this coin is not procurable, except in small quantities and at high rates, anywhere in the neighbourhood, the trader who comes to Madagascar unprovided with a working supply finds himself placed at a grievous disadvantage.

#### AGRICULTURE.

Crown land may now be obtained on leases of 99 years' duration. There is no fixed price: every intending occupier may make his own bargain, but it is not likely that land of good quality will be rented for

less than two shillings an acre per annum for the first half of the period and five shillings for the remainder : at any rate, not until newspaper correspondents and other writers on Madagascar cease to speak of the island as one of wondrous fertility and a very paradise of natural resources. A man has little chance of getting a thing on easy terms when his fellows are continually crying its excellence in the ears of the vendor. There is no doubt whatever that the soil of Madagascar has been overpraised. Those who have practically tested its sugar-growing powers on some of the choicest portions of the eastern sea-board report, that in a very short time its fertility begins to wane and needs to be artificially renewed. The rapidity with which certain well-adapted forms of vegetation spring up luxuriantly is due rather to the abundant rain of the wet season and to a tropical sun than to any special richness of the land. Where the latter is absolutely necessary to profitable production, Madagascar will be found wanting. All this, however, is far from being intended to imply that the island does not offer a promising field for the employment of European capital.

*Sugar*, although not giving results equal to what were expected, is by no means a failure. Hitherto there have been no plantations established except in the east ; but travellers have noticed that the cane grown by the natives on the banks of the north-western rivers has the appearance of being the product of a very suitable soil ; and my own observations in that part of the country lead me to believe that there is land there which will some day be found more valuable than any on the opposite side of the island.

*Coffee* does not grow well on either coast. Nor is that which is produced in the interior at all satisfactory in amount. As regards quality, many people consider it little inferior to Mocha coffee. The most successful experiments with it have been made in the neighbourhood of the westernmost of the two lines of forest which stretch from north to south between the Capital and the east coast. The elevation there is suitable, and there is plenty of moisture.

*Rice* is produced in Imerina in enormous quantities, but the wants of the population are equally great, and are yearly approaching the limits of possible supply. Better means of transport therefore would not develop a trade in this article in the neighbourhood of the Capital. There lies, however, to the north of Imerina, in the Sihánaka province, an immense tract of swampy country which is capable of bearing rice to almost any extent. About the same distance from Antananarivo to the south again, in the Betsiléo country, there are similar natural advantages awaiting employment. Madagascar rice is of undeniably good quality. That of Carolina comes from the same stock, seed having been taken from this country to Charleston in the year 1699.

*Wheat* seems to thrive fairly well in certain parts of the interior. It is grown to meet the necessities of the European community, and costs in the Antananarivo market about six shillings for 100 lbs.

*Tea* has not been tried here yet, but ought to be. The slopes of the Imerina hills are thought by many people to be adapted to this cultivation. Once introduced and found to be successful, the natives would

take it in hand with great readiness ; it would suit their habits and tastes exactly. The women of the poorer classes, who are glad to be able to earn a penny a day by plaiting mats and weaving *rofia* cloth, would find more profitable and equally agreeable work in picking and preparing the leaves of the tea-plant ; and the lightness in weight of the marketable article would allow of its being transported to the coast by the usual means without overburdening the profits.

*Silk*, for the same two latter reasons, affords an opening for enterprise in the interior of Madagascar. It is produced already for the manufacture of the native cloths or shawls called *lamba*, which are so much admired by all who have seen good specimens.

*India-rubber* also deserves attention, especially from those who are interested in keeping the European market supplied with this most valuable product. The indigenous vine yields an excellent quality of rubber, but the supply is yearly diminishing. It is now found only in the depths of the forests, far from the security of settled habitations, and is consequently obtained at considerable risk. No provision is left or made for future needs, the vines being entirely destroyed by the reckless men who wander about in search of them. That a properly managed plantation of this native product would turn out to be a profitable speculation, I have very little doubt. An experiment made by myself a few years ago in the north-west was entirely satisfactory as far as showing the possibility of extending the growth of the vine. A single fruit of it, picked up in the bush, was found to contain no less than 72 seeds, every one sprouting. These were taken to a piece of swampy ground and planted at the feet of tall trees already growing therein, where they readily struck root and for some time flourished, until an unexpected rise in a neighbouring river overflowed and carried them away. It would probably take from four to five years for the vine to grow large enough to endure much cutting. The natives who witnessed the above experiment were fully convinced thereby of the practicability of cultivating the rubber, but such investments for the remote future are not attractive to them. After the first years of waiting there would be little need for outlay on a plantation of this vine, as the cost of preparing the rubber for the market is very trifling.

*Cattle* abound in this country. No estimate has yet been attempted of the numbers, but they must be very great indeed. Travellers who have seen no more of Madagascar than is to be observed on a journey from the east coast to the Capital are sometimes led to imagine that the island is but poorly furnished with live stock. It is in the grazing lands of the north and west that vast herds may be seen roaming at large. For a man to own 2,000 or 3,000 head is no uncommon thing. The numbers slaughtered here in Antananarivo during the annual festival of the *Fandroana* are sufficient testimony to the extent of the people's possessions. Capital invested in a selected herd is said to double itself in three years, when the owner has trustworthy servants who can be put in charge. In thinly-inhabited districts bullocks are frequently killed for the sake of the hides and fat, a large animal in such places being worth from 10s. to 14s. only. The Antananarivo butchers pay from 24s. to 36s.

for the same kind. Exportation is now\* entirely forbidden on account of the war, but even before that it was greatly hampered by an unwise law made many years ago, which prohibits the sale of cattle for shipment at less than 60s. a head. Various devices for evading this regulation were resorted to by the firms engaged in the trade. One, largely practiced by a continental company, was to run a steamer to some unrecognised part on the west coast, and then barter with the Sakalava for guns and powder. This was regarded by the Malagasy people as eminently a European method of provoking them to live up to their treaties with civilised powers. Another plan was to station a highly-paid native employée at one of the regular ports, and provide him with a sufficient quantity of ready cash and a foreign passport. In the market he was an ordinary Malagasy purchaser increasing his stock; when the company's vessel arrived, he became a stranger not amenable to native law. Troublesome inquiries by the local representatives of the Government were then staved off by means of bribes. Cattle were thus procured and shipped at an average cost of 28s. each, the duty of 6s. a head included. At Mauritius and Réunion the usual selling price was about £7 4s. As there is no such thing known in Madagascar as contagious disease in animals, this country would be not only an abundant but also a safe source of supply for the frozen-meat trade.

#### X POPULATION.

The inhabitants of the town and suburbs of Antananarivo are considered by careful observers to number not less than 100,000. Imerina, the province which extends around the Capital to a distance of about 50 miles, is the most thickly-populated part of the island. Its people are fairly industrious, more so by far than those of any other Malagasy tribe. The skill they show in the cultivation of rice, often in the face of natural disadvantages, points to their future career as that of agriculturists. They can be easily induced to work for wages, but I am convinced that it will be found more profitable in the long-run to draw them into such connection with coming developments of their country as will afford them not only an equivalent for their labour, but also a reward for intelligent interest therein. The Hova race will be proud to furnish bone and muscle to co-operate with European wealth for mutual benefit, but it will never submit to be the white man's slave.

Evidently the great problem in Madagascar will be, how to get the workers and the work together. The highland interior is poor in material, but rich in labour; while the lowland coast is fertile, but lacks the husbandmen. He who can secure Imerina labourers to cultivate a lowland plantation will test the merits of the country under the most favourable conditions. The necessities of defence are now forcing the population of the interior to distribute itself to some extent, but the migrations of peace cannot be long delayed if the people continue to increase in the near future as they have done recently in the past.

Next to the Hova in intelligence, although not in strength of character, come the Betsimisaraka, who inhabit the eastern coast. They are well disposed towards foreigners, but the rum trade of Mauritius and Réunion has already gone far to render them useless for hard and regular work.

\* This was at the close of last year, it must be remembered.—EDS.

The Sihanaka and Betsileo tribes, which occupy respectively the interior provinces north and south of Imerina, are equally docile with the Betsimisaraka, having, however, an advantage over them in being more closely allied to the ruling race. The labouring peasant of the highlands is pretty much the same sort of person throughout the whole of the central region. To the south of the Betsimisaraka there are several smaller tribes, of which the Taimôro appears to be one of the most promising from the intending planter's point of view. A number of these south-eastern natives were, before the war began, in the habit of leaving their homes to work on the sugar plantations near Tamatave, which the Betsimisaraka had failed to supply with labour. They are known as a fearless race, but are much given to roving, and have the aspect of being most uncompromising savages.

In the south-west the Ibàra and Mâhafàly tribes seem to be coming in some small degree under the influence of trade with Natal. A kind of broad-bean is cultivated in that part of the country for exportation—a very hopeful sign indeed in a people who are related to the Sakalava, for the latter are, without doubt, the least useful and least open to improvement of all the Malagasy tribes. Their country, which stretches along the western seaboard from near St. Augustine's Bay to the northern extremity of Pàsindava Bay, is, with the exception of such points as are under the immediate authority of military colonies, almost entirely uncultivated, altogether unimproved, and very little open to trade. Even such of the Sakalava as have been under the shadow of the French flag at Nòsibè for the last forty years have not made a hundredth part of the advance in civilisation which the Hova have made during the last ten years under their own Government.

#### MINES.

There has been considerable excitement in Antananarivo and the surrounding country during the past twelve months over reported discoveries of gold and silver. Diamonds even were talked about at one time, and a few of the more adventurous natives rushed secretly off to the localities where sudden riches were supposed to lie waiting for the first comer. Nothing, however, more valuable than a little gold dust has been found by them, and that only after a great waste of labour, and at the risk of long imprisonment and chains. For the Government had wisely resolved, some time before the rumours of discovery had fairly taken wing, to prevent everything like wholesale demoralisation of the people on this score, by appropriating whatever mineral wealth the land might contain. Laws were issued prohibiting unauthorised mining of every description; and, seeing that a double advantage lies in thus controlling the search for hidden wealth, there is but a very poor prospect here for needy diggers who may be tempted to wander to Madagascar in the hope of finding comfort for their disappointments elsewhere. Several such have made ventures already, but a few weeks' sojourn in the island has convinced them of the wisdom of returning whence they came as speedily as possible, with nothing more valuable to carry away than a caution to all their comrades and acquaintances.

W. CLAYTON PICKERSGILL.

## THE IDEAS OF THE MALAGASY WITH REGARD TO DESTINY.\*

**M**OST of us who have lived some time in Madagascar must have noticed the strong fatalistic notions of the people. Every thing has its set time, which cannot possibly be altered; every person, and every animal also, has its appointed time of death, and nothing that any one may do can either hasten this or postpone it to a future day. Such seems to be the prevalent belief among the people. Similarly also most of them seem to believe that for every one there is a certain amount of trouble or sorrow, joy or happiness, allotted to him, as well as a fixed and definite amount of this world's goods; this is decreed for them as their destiny or fate, and they must accept it.

A few years ago—I have not heard so much of it lately—a very favourite topic of discussion with the Malagasy youth was: Can a person die before his day has come? and can anything that he may do hasten the day of his death which had been appointed for him? The majority always maintained the negative. Now I am not going to enter on a discussion as to how far they are mistaken or not in holding these views, all I wish to do is to give a few curious examples of these fatalistic notions that have come under my own observation during the past few weeks.

1. The scene, our dining-room:—We were bidding farewell to a young woman, an intelligent scholar in my wife's classes; she was leaving town to accompany her husband, who had been appointed governor to a place far away in the south. We were very sorry to part with her, and she was evidently sorry to part with us and leave her native place; but having expressed this, she added: "*Anjàrako izàny*" (That is my lot, or destiny); therefore she must go, and it was no use lamenting it.

2. The scene, the large market-place at the Capital:—One Sunday, not long ago, I was riding in my palanquin through the market-place on my return from a service in the suburbs. As we were going along, one of my men saw a small piece of money on the ground and stooped down to pick it up. I remarked to another of my men: "You ought to have seen that; it would have been a nice present for your

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\* This short article was written for the ANNUAL of 1885, but had to stand aside for want of room, I suppose its day had not come! This explanation is necessary, because the circumstances referred to in it, though then of recent occurrence, now belong to the past.



wife." "No," he replied, "that is not my *anjàra*" (or my share); as though he thought that all the property in the world was divided out into fixed lots, and no one could by any possibility get what was the share of another.

3. The scene, the desert, 'No man's land,' which Mr. Wilson and I were travelling over on our way to Manandaza and Ankavandra:—Some wild cattle were seen, and many of our men set off to catch 'nobody's beef;' but none were caught. Some of the men remarked: "*Tsy mbola tonga ny androny*" (Their day has not yet come). Others said: "*Tsy anjàrantsika irà*" (They are not our share). So until we came upon some fulfilling these two conditions, 'Their day had come,' and, 'They were our share,' we were to have no desert beef, and none we had.

4. The scene, Ankavandra in the far west:—Here, most unexpectedly to me, I met the father of the young woman spoken of in Scene No. 1. The governor of this town and I were comparing notes about our children; he told me he had one daughter, from whom he was parted when she was but three months old, as he was then appointed governor to this place, and he had not seen her since. As she had recently left with her husband for a place in the far south, of which he had just been appointed governor, it was now less likely than ever that they would meet again in this world. I was expressing my sympathy with the old man on this account, when one of his followers remarked: "*Anjàrany izàny, koa hanào ahàna hlanào ?*" (That is his lot, so what would you have ?)

The Rev. W. E. Cousins has well remarked, speaking of the days before the arrival of the early missionaries: "The almost universal belief in *vinjana*, or destiny, had sapped the very foundation of faith in a free and powerful God." This was very true at that time, and I fear it is true of many in our day. Some of them so believe in this, that they will not even try to repent or turn from their evil ways. Others, when they are taken ill, at once believe their day has come, and so, utterly despairing of any recovery, pass away; many such instances could be given.

The people find, as so many have found before them, how impossible it is to understand with our finite wisdom the connection between the fore-knowledge of God—He knowing every thing, the end from the beginning—and our free will to choose the good and reject the evil, or to choose the evil and reject the good.

HENRY E. CLARK.



## MALAGASY HYMNOLOGY,

## AND ITS CONNECTION WITH CHRISTIAN LIFE IN MADAGASCAR.

FEW facts with regard to the history of Christianity are more clear than the intimate connection which exists between the spiritual life of any people, and the hymns and sacred songs they sing. In all parts of the world, and in all ages, from Apostolic times until the present, the hymns of every Christian community have closely reflected its faith, its love, and its aspirations after God, and have been its joy in prosperity, and its solace in trial and persecution. From the "psalms and hymns and spiritual songs" of the Apostolic churches, through the Latin hymns of the mediæval period, the chorales of the continental reformed communions, and the outburst of hymnology which accompanied and stimulated the revival of spiritual life in England, down to the sacred songs of the American revivalists—a continually augmenting stream of divine melody has flowed down the centuries to refresh and comfort and console the widely-scattered members of the universal Church. Here has been the one point of agreement for all, greatly as they may differ in everything else; for in their hymns, the Romanist and the Protestant, the orthodox and the latitudinarian, the conformist and the nonconformist, continually find themselves singing the same strains, and discover a bond of union in a heart-devotion to Christ which, for a time, throws all minor differences into the shade.

The history of Christianity in Madagascar has been no exception to the general experience of the Church, and from a very early period after its introduction into the island, hymnology has always been a great power, and has aided very largely in the promotion of Christian life and knowledge among the people. The Malagasy tribes with whom we are best acquainted—that is, those in the central and eastern provinces—are extremely fond of music and of singing; and they have a very correct ear for harmony, readily taking the different parts of a tune, and when they do not know the proper bass, tenor, or alto, frequently improvise one for themselves as the tune proceeds. The native songs, which between forty and fifty have already been printed, besides a considerable number still only in manuscript, have no rhyme and but little approach to metrical structure; but they are most of them arranged in a very regular form as regards lines and stanzas, and have a rhythmic flow, and a frequent parallelism of numbers, much resembling the arrangement of Hebrew poetry. These songs often have a refrain or chorus, and are sung to tunes which are generally plaintive and in a minor key; sometimes one of the party acts as a leader, with a kind of recitative, the rest of the singers joining in the chorus, often with the accompaniment of regular clapping of hands, and the beating of a drum or the playing of a native guitar.

The small band of missionaries of the London Missionary Society, who laboured so strenuously from 1820 to 1835 to lay the foundation of

the Church in Madagascar, seem to have attempted to give the people some hymns in their own language as soon as they had reduced the Malagasy tongue to a written form. They began printing lesson-sheets, etc. towards the close of the year 1827, and the Gospels on the first day of 1828; and it is probable that some of the first hymns were given to the people in leaflets or other separate form, since 800 copies of a small volume of hymns for public worship had been printed by the early part of April of the same year (1828). Another edition, of 4,500 copies (132 pp.), was printed in 1835, just before the promulgation of the laws forbidding Christian worship and teaching.

This hymn-book was reprinted two or three times in England by the Religious Tract Society during the long quarter-century of persecution (the first reprint in 1849, an edition of 2,000 copies); and its collection of 168 hymns was most intimately bound up with the religious life of the Malagasy, both in the time of comparative freedom they enjoyed previous to 1835, before their European teachers were obliged to leave them, and still more so during the long weary period of repression, which they still call the time when "the land was dark." Some of these hymns, probably the majority of them, were written by the missionaries themselves, others by their pupils and some of the more intelligent native Christians; but, strange to say, although the excellent fathers and founders of the Madagascar mission were quite capable of writing metrical hymns in English, as is proved by the translations they gave of some of the Malagasy hymns, not one of these latter was rhythmical in structure, much less did they attempt rhyme. Although all their hymns were arranged in the proper number of syllables to form the familiar metres known as 'long,' 'common,' 'short,' and 'sevens,' as well as a few of the 'peculiar' measures, there was no regard at all paid to accent, so that to those who know the language it is painful to hear the words tortured by being persistently mispronounced, as they must be, every time they are sung to a tune of the metres just mentioned.\* It is difficult to understand why, with the minute and accurate acquaintance with the Malagasy language they possessed, they did not attempt to write rhythmical hymns, but such was the fact, a fact which must be regretted, since, from the improved musical taste of the people, these old hymns are rapidly becoming obsolete. And yet many of them are, notwithstanding their metrical defects, beautiful in their language, and fervent and evangelical in tone. Take, for example, the following, a free adaptation of "How sweet the name of Jesus sounds" :—

Jéso nó anàran-tsóa,  
Ràha rên' ny mîno,  
Afaka ny àlahèlony,  
Dia fàly ny fòny.

Ràha mangètahèta isika,  
Ràno vèlona Izy;  
Ràha nôana, mōfon' aina,  
Maràry, ôdy aina; etc.

\* Here are a couple of verses, accented, of so-called 'common' and 'long' metres :—

C. M.  
Ny lalàna izày natàon'  
Andriamànitra  
Tàmy ny ôlombélona  
Màrina indrindra.

L. M.  
Hàja sy vôninahitra  
Hô an' Andriamànitra;  
Fa Izy hiàny no mahéfa  
Izày sìtraky ny fòny.

Almost literally translated :—

Jesus is the blessed name,  
When heard by the believer,  
Gone is his sorrow,  
For glad his heart.  
When we are thirsty,  
Living water is He;  
When hungry, Bread of life,  
Ill, Medicine of life.  
Rock of refuge,  
He whom I trust;  
Shield to protect me,  
Lest I see evil.

Friend and Brother,  
Redeemer and Lord,  
Life, Way, my Surety,  
Receive my praise.  
Simple and foolish am I.  
Ashamed am I, O Jesus,  
My love to Thee  
Is little, as nothing.  
But Thy love to me  
Is one, unchangeable;  
Living, I praise Thee,  
Dead, praises increase.

Here is another favourite hymn, the key-note of which is, "Jehovah io anjarako"—"The Lord is my portion":—

Jehovah is my portion,  
I will not be sorrowful,  
For Jesus is my Redeemer,  
I will therefore rejoice.  
Many are they who love wealth,  
Numbers desire money,  
But I already possess,  
Jehovah is my portion.

His commands are sweet to me,  
His counsels do I love,  
His words make wise,  
The blood of Christ makes clean.  
The world is not sweet to me,  
I desire not its delights;  
Farewell to it all,  
Jehovah is my portion.

Thine indeed, O Jesus,  
Is my whole spirit;  
Make me Thine own,  
Thou art my portion.

We find also translations, or rather, adaptations, of several other well-known English hymns, such as, "When I survey the wondrous Cross," "Lo! He comes, with clouds descending," "The heavens declare Thy lory, Lord," "Awake, and sing the song," and "Lord of the Sabbath, hear our vows." But many others appear to be original compositions, only slightly, if at all, inspired by English hymns, although full of Bible thoughts. Here is one referring to the Scriptures :—

Sweet is Thy word,  
Holy Jehovah!  
And true is Thy word,  
Not to be changed;  
The heavens shall pass away,  
But Thy word shall remain.  
Pure is Thy word,  
And precious indeed,  
So making wise  
Those who are simple,  
Scattering the darkness,  
And bringing the light.

Good is Thy word,  
Renewing the heart,  
For there 'tis we see  
One Who redeems,  
Jesus, well-spring of life,  
Washing the guilty.  
Desired of my heart  
Is the sacred word,  
More than great riches,  
Or wealth overflowing;  
Thy word will I keep,  
My enduring possession.

These old Malagasy hymns reflect very clearly the theological feeling of the period in which they were written, about half a century ago. There is a distinct enforcement of the Law and its penalties, but there at the same time an evangelical fervour, and a firm grasp of the demptive work of the Lord Jesus Christ, as well as a distinct personal

appropriation of the blessings He bestows. It was this element in the early Malagasy hymns which made them so precious to the persecuted people, and on account of which they became interwoven with all the trying experiences of their Christian life for so many years.

Here and there among this old collection of Malagasy hymns are two or three decidedly curious specimens of hymnology. These were written by natives, and one of them consists almost entirely of Malagasy proverbs strung together, most of which treat of the uncertainty of life, from a heathen point of view, but with a Christian sentiment at the conclusion as a kind of 'moral' to the whole. Here is a literal rendering of this strange composition :—

Life is a broken potsherd,  
No one knows who broke it ;  
Life is but steam of food,  
No one sees where it goes.

The appointed time of death is unknown,  
A tree on the brink of a precipice,  
No one knows when it will fall,  
Whether by day or night.

But once only are we young,  
One throw (of the spear) only ;  
Death is a swift runner,  
God is the Lord of life.

To die once may be borne,  
But second death is unbearable ;  
Blest are the believers in Christ,  
For they shall obtain life.

Such productions are, however, exceptional ; and the great majority of the hymns are quite free from such incongruous elements.

The hymns of fifty years ago were, of course, sung to the tunes of the same period ; and when we re-commenced mission-work in Madagascar after the re-opening of the country to Christian teaching in 1862, we found the people singing tunes now seldom heard in our home churches and chapels, but which were familiar to English congregations of two generations ago ; tunes, for instance, such as "Lydia," "Cranbrook," "China," "Calcutta," "Rousseau's Dream," "Piety," "Zion's Joy," etc. During the first few months of my residence in Antananarivo I well remember hearing tunes sung in the native chapels to extremely slow time, but although they had a certain familiarity, I could not for some minutes identify them with anything I knew ; but it gradually dawned upon me that these were well-known old tunes, but being sung about four times as slow as was then the custom in England, were so different in effect as to be at first hearing unrecognisable. I have little doubt, however, that this slow time was about the speed at which it was usual for these hymns to be sung by the first missionaries (for we have wonderfully quickened the pace of our English singing during the last few years) ; and thus the traditions of the singing of their first teachers had been kept up during the twenty-seven or twenty-eight years which had elapsed since they were driven away from the island.

And what a solace and a joy were those old hymns to the early Malagasy Christians ! Wherever they went they carried their hymn-book with them, often bound up with their Testaments, and the strains of these sacred songs always mingled with their worship. On the very last Sunday evening (22nd February, 1835) that public services were allowed to be held in the capital city, the Queen's anger was excited as she passed near one of the native chapels by hearing the hearty singing of the congregation ; and she observed to some of her attendants,

"These people will not be quiet until some of them lose their heads." and so it really proved to be the case again and again, as one after another of them fell a victim to their sovereign's rage against the praying customs; for, like their prototypes in the time of Pliny, they persisted in "singing hymns to Christ as God." Of the first martyr, Rasalâma, it is recorded that on being put into chains and cruelly beaten, she continued to sing; and so she did still on the following morning, when he was borne along to the place of execution at the southern extremity of the long rocky ridge on which the Capital is built. And when another Christian woman, Rafâravavy, with her five companions, had succeeded, after wonderful perils and hair-breadth escapes, in reaching the coast at Tamatave, and were safe on the deck of the ship which took them to England, their first feelings of thankfulness for their deliverance found expression in singing one of their hymns.

And the strains of sacred song continued to be heard all through those weary years. In the 'Great Persecution' of 1849, when many hundred Christians were punished by fines, slavery, chains, and beating, and when eighteen of them suffered death, the condemned ones sang the hymn commencing

Âry misy tany sôa,  
Mâhafinâritra indrindra.

There is a blessed land,  
Making most happy.

How appropriate this was to their position then may be seen by glancing over the following almost literal translation:—

There is a blessed land,  
Making most happy;  
There no trouble enters,  
There, no vexing care.  
There shall the righteous reign,  
Joyful for evermore;  
None shall mourn again,  
Of all the dwellers there.

All they longed for obtained,  
All their hearts' desire;  
No good thing they lack,  
Now and for evermore.  
The departing from this life,  
Just a moment's pang,  
Is all that separates us  
From that blessed world.

Their light affliction, a momentary spasm or pang, as the native word in the fourth verse means, they knew would speedily work for them "a more exceeding weight of glory." Fourteen of them were taken to be hurled over the steep cliffs of Ampâmarinana, just below the palace; and of one of these it was said that he sang up to the moment he was thrust over the precipice; while of them all it is recorded that they sang the hymn beginning, "Râha ho fâty aho," which may be thus translated:—

When I shall from hence depart,  
And forsake my kindred dear;  
When for me they mourn and weep,  
I shall go rejoicing there;  
When from life on earth set free,  
There shall I in rapture be.

Hark! they summon me away  
To the blessed world above;  
There shall I rejoice alway,  
There my soul be filled with love;  
All my heart's desires obtained,  
All I hoped for fully gained.

All things earthly, now farewell!  
For I thus fruition find;  
Hence in joys untold I dwell,  
Heaven my heritage on high.  
From all fear of death set free,  
Death is conquered now for me.

Another hymn is also remembered as one of their death-songs—one which is full of joyful anticipation of beholding the Lord Jesus, and beginning, "Ràha ho hltany aho, ràvo any an-dànitra," almost literally translated thus :—

When He shall behold me	Ah! conquered is the enemy,
Joyful there in heaven,	The conflict for ever o'er.
In the days to come,	Assembled are the mighty,
There, in Jesu's presence,	Entered are the just ;
I shall have gained my desires	Every one of the pure rejoices,
And the longing of my heart ;	Rendering thanks and praise.
Freed from all affliction,	Jesus is their glory,
Overflowing with gladness.	Jehovah is their shield.

A little later in the day, the remaining four of the condemned Christians, who were of noble rank, were led to be burnt alive at Fàravòhitra, the northern end of the city hill ; and here again the song of praise arose ; for as they ascended the hill they sang the hymn which for some years previously had been, and ever since then has continued to be, the dismissal hymn of the native congregations of Madagascar, being invariably sung before they disperse. It is always sung to "Mariners," and probably this was the tune those four Malagasy confessors sang as they went to their death, and even as the flames rose around them at the stake. The hymn begins with the words, "Hòdy izahay, Zànahàry,"\* and may be thus rendered :—

Home return we now, Creator,	Thanks, abounding thanks, we render
Let Thy blessing from above	For the sacred message heard,
Gladden all our waiting spirits	Which Thou givest to enlighten
With Thine all-abounding love.	Us in knowledge of Thy word.
Gladden Thou us,	Dwell among us,
While we sojourn here below.	Through Thy presence day by day.
And when death shall hence remove us,	
And on earth no more we stay,	
Then do Thou our souls make joyful,	
Take us on our heavenly way ;	
There, rejoicing,	
Shall we live in endless day.	

The hymn might almost have been written for such an hour as that, for death was indeed about to remove them to the heavenly mansions, to the endless day, of which they sang ; they were truly "returning home," not *from* the earthly sanctuary, where they had so often sung those words, but *to* the heavenly one—the house not made with hands.

Yet one more hymn was also sung by the Faravohitra martyrs, one which ends in each of its four verses with the words, "Tsaròvy izahay" ("Remember us"). Of this hymn the first and the last verses run thus :—

When our hearts are o'erwhelm'd	And when death itself
Because of the oppressor,	Approaches us nigh,
When that comes to pass, Lord,	And spent is our strength,
Remember us.	Remember us.

\* The Malagasy hymn is no doubt a free rendering of "Lord, dismiss us with Thy blessing," but I have attempted to give a closer translation of the native version than the English original supplies, and in the same metre.

So strikingly appropriate to their circumstances was every one of these requiem hymns.

Mr. Ellis relates that in a letter he received from the native Christians at the Capital during his first visit to Tamatave in 1853, they told him "that a number of them went out to a solitary place, to sing together for joy at the prospect of receiving copies of the word of God."\* While at the same place for a few weeks in the following year, Mr. Ellis was frequently visited at night by a number of the Christian Malagasy for conversation on various subjects. These meetings were always associated with the reading of the Scriptures and prayer; but besides this, these believing people often could not depart without also singing a song of praise, although it was decidedly perilous for them to do so. Mr. Ellis adds that although they bent their heads down, and only sang the native hymns in an undertone or whisper, to English tunes, he was at times alarmed lest some unfriendly passer-by should hear. It seemed as if the instinct of praise could not be repressed among the persecuted people.

And so, during their long trial of faith and patience, the Malagasy Christians solaced themselves with their hymns: they sang them in rice-holes and in caves; in the recesses of the forests; on the tops of lofty hills, where they could watch from afar for any unfriendly approach; and in stealthy meetings by night in the houses of their friends;† and, as we have just seen, the words of these sacred songs were sung on several occasions with their dying breath. But still they sang on and believed, as one of their hymns expresses it, that

Not long will endure	Shall the sorrowful suffer;
The stormy night,	Yonder is the daybreak,
Not for many days	Happiness is near.

And accordingly, in 1861, the sighing of the prisoners was heard; God delivered those who were appointed to death; and with the decease of Queen Ránavalona came the opening of the prison-doors to those who were bound, and freedom of worship was again restored. When Mr. Ellis arrived at Tamatave in 1862 and met the rejoicing Christians, it seemed a strange contrast to his former visits to hear them singing aloud, with cheerful voices, for this part of their worship he had only heard offered before in a whisper or undertone. And at the close of the service they sang, with much appropriateness to the occasion, the native Jubilee hymn, describing the captive and exiles' return:—

Blow loud the trumpet,	One there is Who sets free
Which tells of Christ;	All who have been bound,
Yes, proclaim aloud	And calls together the scattered,
That the Jubilee is come.	For the Jubilee is come.

\* *Martyr Church*, pp. 182, 187.

† One of the hymns, which commences with a bright and cheerful ascription of praise to God, ends with what is like a wail of sorrow from the persecuted, so that one might almost suppose it to have been written in the very time of trial:—

Oh, our Creator!	For caves are our dwelling,
Oh, Jesus the Saviour!	Holes in the rock our refuge;
Oh, Holy Spirit!	Thy mercy alone can gladden
Save the afflicted people.	The pilgrims on their way.



To redeem the enslaved,  
To obtain a great heritage,  
Come home, all ye scattered ones,  
For the Jubilee is come.

For Satan is conquered,  
There is forgiveness of sin ;  
Return, O ye wanderers,  
For the Jubilee is come.

For some few years after the re-opening of Madagascar to Christian effort, the original hymns prepared by the first missionaries were used unaltered and without any additions. There was a curious mixture of old and new tunes ; the former, as already mentioned, 'survivals' of the early period, and a few of the latter taught by the missionaries then commencing their work. But with these there came also a number of other tunes, some picked up from barrel-organs, and dance-music learned from the military bands,\* often most incongruous and inappropriate to the words to which they were sung ; and together with these were a few native melodies. From this strange mixture of tunes for religious worship a number of most elaborate pieces were composed by certain native musical geniuses. Some of these were of great length and complexity, occasionally not without considerable ingenuity and some merit in composition, but sometimes with a curious, and almost comical, bass accompaniment, more like the grunt of an animal than the sound of a human voice. But all were utterly unfit for congregational worship ; indeed it often puzzled us how the singers themselves learned such lengthy and elaborate compositions. It was said that they sometimes sat up all night practising these pieces, for which they paid a considerable sum (for Malagasy) to the teachers. The service of praise was thus thrown almost entirely into the hands of the singers, many of whom were slaves, and were often people quite unfit for the position they occupied as leaders of religious worship. The opening of new chapels in the country, and the united congregational meetings held on the first Monday morning of every month, were the grand times of display for these performances, so that this part of the service often became a mere singing contest, in which parties of singers from different chapels vied with each other in producing startling effects.

But what (it may be said) were the missionaries doing meanwhile ? The highly unsatisfactory state of things just described reached its climax two or three years after the burning of the national idols in 1869, when for some time there was imminent danger that the Christianity of the congregations formed previous to that date would be swamped by the flood of heathen people who then poured into the existing chapels, and into the new ones which were being built by hundreds all over the central provinces. The missionaries were then a small band of not more than a dozen men, and we were almost overwhelmed by the work of every kind thus thrown upon us. We were painfully conscious of the evils inevitably arising from such a transitional state of society, and not least by the unedifying character of public worship, especially in places away from our immediate influence ; but by teaching good tunes, by speaking upon

\* I well remember hearing good Mr. Ellis, in his own peculiar pronunciation and dialect of Malagasy, gravely rebuking the singers at Ambátonakānga after they had been singing some particularly lively jig to a rather solemn hymn, by saying, "Tsy mety izany, ry sakiza ; takaninny fiddle, takaninny dansè izany ;" Anglicè, "That's not proper, O friends ; like a fiddle, like a dance, is that."

the subject of praise in worship, and by papers and discussions in our half-yearly Congregational Union meetings, we strenuously endeavoured to guide public opinion into a more excellent way.

Two or three years previously the late Rev. R. G. Hartley had written the first rhythmical and rhymed Malagasy hymn, a composition in which the work of the Lord Jesus as the Good Shepherd was beautifully and idiomatically expressed. It will be seen from the two following verses that the accent is perfectly regular to the metre :—

Jèso Mpamònjy, Mpiàndry tokòa,	Taomin' ny ràtsy, fitàhin-tSatàna,
Ampiverèno hanàrak' Anao	Efa ho lãsan-ko bàbo 'zahay ;
Ondry mania, manàry ny sòa,	Fá Hianao no mahéry mitána,
Aza avèla hiàl' aminao.	Tsỳ hahavèry ny òndry iray.

Jesus the Saviour, true Shepherd (of sinners),  
Cause to return to go after Thee (now)  
Wandering sheep (all) forsaking the pasture,  
Do not permit them to wander from Thee.

Led by all evil, deceived by the devil,  
Just on the point of captivity gone,  
Thou art alone the All-powerful to hold us,  
So of the sheep shall not perish e'en one.

The Malagasy verses have a ringing smoothness of cadence which quite caught the native ear, and when, some time afterwards, they were set to the tune of "Hail to the brightness," the hymn immediately became very popular. Mr. Hartley wrote about a dozen other excellent hymns ; these were included in a new edition of the hymn-book which he edited in England, where he died early in 1870. The same number of the least meritorious of the old hymns were omitted to make room for the new ones, so that the figures by which the majority had been known were retained unaltered. Several of the new hymns were original compositions ; others were adaptations of English ones, such as "Son of my soul, Thou Saviour dear," "Begone unbelief," "Jesus, Thy robe of righteousness," "I'm but a stranger here," etc. It is worthy of remark that the last hymn written by Mr. Hartley was one expressing perfect trust in God and submission to His will :—

If dark should be the way,	Whether I long shall live,
Jehovah, O my Lord !	Or soon shall pass away,
On Thee is all my trust ;	My lot's ordained by Thee,
Thou only art my lamp.	I would not choose myself.
What shall befall I know not,	Thy pleasure is my own,
For hidden is from me	Jehovah, O my Lord !
The days I yet shall live,	Upon Thy word I wait,
Which Thou hast foreordained.	In Thee is all my trust.

Meanwhile, others were at work in the same direction. The Tonic Sol-fa system was taught by several missionaries, and before long many hundreds of the children and young people were able to sing at sight from that notation. With their quick ear and natural taste for music, they learned rapidly, so that soon many were qualified to teach others. Several missionaries began writing hymns, some of which were published in the monthly magazine *Tény Sòa* ('Good Words'), and others in leaf-

lets. Some of these were very popular, and were printed and sold by thousands, many of them together with the tunes in Sol-fa notation; and subsequently several large editions of the hymn-book, now nearly doubled in size, were disposed of, as well as great numbers of cheap school hymn-books, Sol-fa tune-books, collections of anthems, etc. Many of the intelligent Christian Malagasy began under English guidance to write rhythmical hymns, some of which are quite equal to those written by Europeans. A most marked revival of congregational singing thus took place, and for some three or four years hymns and hymnology attracted a great deal of public attention. Several more of the classical hymns of England were put into a native dress, amongst others, "Rock of Ages" (a very excellent rendering, of which a specimen verse or two is given below\*), "Come, ye sinners, poor and wretched," "O come, all ye faithful," "Abide with me," "Thou art gone to the grave;" as well as many more recent ones, such as "Holy, holy, holy, Lord God Almighty," "We plough the fertile meadows," "Saviour, again to Thy dear Name we raise;" and many children's hymns, including "Mothers of Salem," "Oh, that will be joyful," etc.

At the same time—that is, about twelve or thirteen years ago—the hymns of the American revivalists, Messrs. Sankey, Phillips, and Bliss, found their way over to Madagascar, and soon became very popular both with the Europeans and natives. It was not long before many were put into a Malagasy dress, and being sung to the same tunes as their English prototypes, speedily became the most favourite songs of the people; so that for some years past the strains so familiar in England and America have been equally popular in Madagascar. In church and school, in the people's houses after they had eaten their evening meal, in the fields as they were at work, and as they walked along the roads at night, one constantly heard the music of "Hold the fort," "The sweet by-and-by," "What shall the harvest be?" "That will be heaven for me," "Shall we gather at the river?" and others far too numerous to mention. The musical and liquid- and vowel-loving Malagasy language easily adapts itself to all the varied metres of European hymns, and there seems little difficulty in using it in any style of versification; although, from the structure of the language, and the system of suffix pronouns, the choice of rhymes is much less varied than in English. Herewith are specimen verses of hymns in two metres, both exactly rhythmical and rhymed, the first by an English missionary,† a capital rendering into Malagasy of the fine missionary hymn, "Hail to the Lord's

\* Jéso, Vätolämpinay  
O! arôvy izahay,  
Ká ny fônay mbá sasao  
Mânafáh' anay izao;  
Mbà tsy hisy 'zay hanjò  
Olon-tsy mahitsy fô.

Tsy ny ásanay atao  
Mâhatò ny didinao;  
Tsy ny hàzotqam-pô  
Nô maházo mánadio;  
Tsy ny rânómásonay  
Nô maháfa-trôs' anay.

(Rev. R. Baron.)

† Rev. J. Richardson, to whom the Malagasy owe much for his efforts to improve their hymnology (30 hymns in the hymn-book now in use are of his composition), and also for the most thorough and scientific teaching of the Sol-fa system, and for the preparation of tune-books, school song-books, etc. Amongst other hymn-writers were the Revs. W. E. Cousins, R. Toy, J. A. Houlder, G. Cousins, R. Baron, and C. T. Price; and among the natives, J. Andrianavoravèlona.

Anointed;" and the second by a native Malagasy,\* a translation of "The Lifeboat" from Mr. Sankey's *Sacred Songs*, both hymns being sung to the same tune as their English originals:—

Faingàna, rỳ Mpanjàka.  
Handray ny lóvanao;  
Faingàna rè, mba hàka  
Ny tàny hò Anao;  
Avia, hàmpifály  
Ny màlahèlo fò,  
Afàho nỳ mijály  
Sy àzon' ny manjò.

Avia, fà misénto  
Atỳ ny ólonao;  
Ny fànjakàna ènto,  
Fa Tòmpo Hlanao;  
Tsy mỳsy hitomàny  
Èo ànatrèhanao;  
Hiàdana ny tàny,  
Izày halèhanao.

Ry Kàpitény! bè ny àdy manjò,  
Efa ho rèraka sy kivy ny fò,  
Ka hátanjàho mba hatòky Anao,  
Tòmpo ô, avia hamònjy àhy izao.

Ny fàhavàloko atỳ mba resèò,  
Ka taomy àho mba handray ràhatéo  
Ny fiadian' àvy ao àminao;  
Tòmpo ô, tsinjòvy àho, àza mandao.†

In the promotion of this revival of congregational singing and hymnology in Madagascar the Press of the mission of the Society of Friends has not been behind that of the London Missionary Society; and we have a noteworthy illustration of the way in which common Christian work makes good men overlook minor differences, in the fact that several of the new hymns were composed by Friends. One of the earliest popular children's hymns was written by Mr. Joseph S. Sewell, for several years the senior member of their mission in Antananarivo. This was a translation of "Whither, pilgrims, are you going?" The translation of "Abide with me" is also Mr. Sewell's.

An edition of a Sol-fa tune-book was published in 1879, in which suitable tunes are given for every one of the 247 hymns in the enlarged hymn-book. These are very varied in character, being derived from a number of different sources, and the grave and severely classical styles are mingled with the more lively and popular ones. One or two of the old native melodies are retained to the hymns to which they have been so long sung. Some of the 'Services of Song,' for several years past so popular in England for Sunday-school anniversaries, festivals, and other occasions, have been put into Malagasy, the hymns being translated, together with the connective readings. The "Pilgrim's Progress," "Samuel," and others have in this way been made available for Malagasy services, and have given great delight to old and young.

Thus it will be seen that in their service of praise the Malagasy congregations have already become largely one with their mother churches in England who have sent them the Gospel, for they sing numbers of the same hymns and the same tunes as those sung in England. But we

\* Rajaonàry, once a pupil of the writer's, and now for some years pastor of the Ambàtona-kànga Memorial Church at Antananarivo.

† These hymns may be read by English readers with little difficulty by observing the accents, and by remembering that the vowels have the power of the letters in Italian or French, except *o*, which, save in the exclamation, marked ô, is always like our English *o* in move, to, do, etc. The consonants are much the same as in English, except that *g* is always hard, *s* always *s* and not like *z*, and *j* is hard like *dz*. In the terminal rhymes (as well as elsewhere), *ao* is sounded like *ow*; *ay* (and *ai*) like *eye*; *io*, like *ewe*; and *eo* like *a-oo*. The diphthongs *ao* and *ai* (*ay*) are always long and accented, so they are left here unmarked. *I* and *y* are identical, the latter being always used as a terminal.

may hope that with deepening Christian experience and knowledge, there will yet be a fuller and more original expression of devotional feeling in sacred song; and that many native poets will be raised up who shall do for the sacred poetry of Madagascar what Watts and Wesley, and Keble and Lyte and Bonar, and a host of others, have done for English hymnology, and shall thus embody in "immortal verse" the faith, the hope, the joy, and the yet wider experiences of Malagasy Christianity.

JAMES SIBREE, JUN. (ED.)

#### POSTSCRIPT.

THE preceding paper was written during my furlough in England about five years ago, and there is little to be added to what was there said about Malagasy hymnology, and about praise in public worship in this country. The writing of new hymns has almost ceased of late years, except a few for Sunday-school anniversaries or other special occasions, and published in separate leaflets or in some of the monthly periodicals. None of them have yet been incorporated in our hymn-book. Judging from what I have observed since my return to Madagascar three years ago, I fear it must be confessed that little, if any, progress has been made of late years in promoting a more congregational style of worship, as regards the praises offered by the people. It is true that in most of the large churches in the Capital, as well as in many of the stronger and more enlightened country congregations, the tunes sung are usually taken from the Sol-fa tune-book mentioned above, tunes which are appropriate and devotional, to our European notions, as well as easily learned. But a very different style of music—if music it may be called—will be heard every Sunday in the great majority of our country churches. It is difficult to describe these strange sounds so as to convey any clear idea of them to those who have not heard them. Noisy repeats of some refrain, picked up probably from European sources, with curious alternations of bass and treble and tenor, with now and then a passage shewing *some* idea of a melody, as well as occasionally a fair harmony—these may be said to characterize the sacred music of the mass of Malagasy congregations at the present time. Often these strange compositions are very long and elaborate and must take no small amount of time and trouble to learn; they usually embody some words taken from Scripture, or from some hymn; but perhaps their most objectionable feature is that only a few *can* master them, so that anything like common, congregational, and united vocal worship is impossible.

I think few would object to hear in every service *some* sacred music having the character of an anthem, to be sung by the quire only, the majority of the worshippers not joining audibly in this part; but this should not form the only or chief portion of the praise. That many of the Malagasy have some musical taste and power of composing music, will I think be acknowledged by all who have listened to the music of a sacred concert like that given by the Native Preachers' Association at the Ampàmarinana Memorial Church on Saturday afternoon, May 1st, 1886, when a number of sacred pieces were sung, several with instrumental accompaniments, and all, I believe, entirely of native composition. Many of these seemed, at least to those who had no scientific knowledge of music, to be most excellent and appropriate, and suggested that there was sufficient acquaintance with musical science, as well as enough correct taste, in some of our educated native friends to fit them to be composers of appropriate hymn-tunes and anthems for divine worship. Similarly excellent sacred pieces were also sung at the opening of the pretty village church at Anjānahary on the 1st of last July. One is inclined to

think that we Europeans have not yet hit upon quite the right style of sacred music for the Malagasy, or upon the right way to go to work in teaching them. Have we not been a little too exacting in restricting the majority of the tunes we have taught them to the rather severe modern classical style of composition and harmonies? And would not a greater latitude of *style* of tune, something with repeats, fugues, and responsive parts, similar to the tunes sung by our fathers and mothers fifty or sixty years ago, be more suitable to the present stage of musical culture and taste among the people? Especially would it not enable and stimulate a much larger proportion of our congregations to join audibly and heartily in public praise? Certainly a great deal remains still to be done before the singing in the vast majority of our churches can be deemed satisfactory, whether we consider the spiritual profit of the worshippers or the glory of God.

I will only add here that I accepted with pleasure the offer of my friend the Rev. A. M. Hewlett, M.A., to add something about hymnology and sacred music in his own branch of the Christian church (the Anglican) here in Madagascar. His paper accordingly follows herewith.—J.S.



## SOME THOUGHTS ON<sup>x</sup> CHURCH<sup>x</sup> MUSIC IN MADAGASCAR.

**M**USIC is a great power in education. This fact has been more and more fully recognized in successive Codes of the Education Department in England, and must not be lost sight of by those who are privileged to have a share in the education and advancement of the Malagasy nation. A former writer in this periodical\* has described the love of the Malagasy for the old hymns which were introduced by the earliest missionaries from England, and which were the comfort of native Christians in days of persecution. He mentions the defects in those primitive specimens, especially that singular fact that there was no attempt at *rhythm* in them, strong syllables falling for the most part on unaccented notes in the music. Since Mr. Richardson wrote, much has been done towards improvement in this matter, but much still remains to be done. We agree with that writer in wishing that any style of music which has been, and still is, in whatever degree, the vehicle of heart-felt prayer, may be allowed to die a gentle death, but with him we say "it must inevitably go." How strange it would be to hear an English congregation singing the two following lines to "St. Anne's" or any common-metre tune :—

The Almighty hath créatèd  
Heavèn and the océan.

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\* Rev. J. Richardson, in the *ANNUAL* for 1876, p. 23; see also *Reprint*, p. 151, seq.

Yet such is the character of the rhythm in very many Malagasy hymns; and the absence of the 'scanning faculty' in the Malagasy mind up to the present time is so complete, that such hymns do not excite any feeling of dissatisfaction. Here then the need of training is seen. While there is much scope for taste both in music and in poetry, and much that is accepted in Europe might never be appropriate in Madagascar, yet each art has its absolute rules, which cannot be broken with impunity; and we shall never raise music and poetry to their proper place as powers to educate the native mind and soul, if we acquiesce in the use of such hymns as those indicated above.

The chief difficulties in the way of mending old hymns or composing new ones seem to me to be two: (1) the fewness of firm ultimate syllables in the language, and (2) the number of words that are needed to give full sense. With regard to the former point, most readers of the *ANNUAL* are acquainted with those often-recurring final syllables *ka*, *na*, and *tra*. Now we shall not get any good poetry or hymns until it is a recognized canon that to place any one of these in an accented place in the scanning or music, to allow one of them to fall on the 'down beat,' is a capital crime, and deserving of the punishment which befalls an English schoolboy when he makes a false quantity in his Latin. How many a Malagasy hymn is kept from being classed as 'excellent' by the admission of this fault! Take an instance: Dr. Bonar wrote:—

A few more years shall roll,  
A few more seasons come,  
And we shall be with those that rest  
Asleep within the tomb.

Notice the firm syllable at the end of each line. Don't clip it in singing. How well that word "tomb" comes out on the dotted semibreve in the music! Now compare the following, which those who know the Malagasy language will allow to be a fair translation of the above:—

Handalo faingana  
Ny taona sisa atỳ,  
Dia hody mandry izahay  
Hiala sasatra.

I have often taught this by rote to a congregation or school. The second line falls naturally into rhythm. The Malagasy repeating it say, "*Ny taona sis(a) atỳ*" as naturally as we say, "A few more seasons come." But the fourth line? All you can hear in the repetition is "*Hiàla sàsatr.*" The final *a* is no doubt sounded by them, but sounded most lightly; and this is the note that we expect them to hold out for three beats, thereby murdering either the music or the genius of the Malagasy language. These three final syllables then must be carefully avoided in all accented places. And so also should we avoid the suffix pronouns of the first (singular) and third persons. Take two simple lines from a version of "Jerusalem the golden:"—

Mpanjaka manan daza  
No monin(a) aminy

(i.e. 'He is a glorious King Who dwelleth with them'). Now the last line in rhythmical enough in reading "*No mōnin(a) aminy*," because the

last syllable may be read short; but if you set it to its tune, and hold out the last syllable to the final semibreve, you get "*No mōnin(a) aminy*," which is worse than singing in English, "A famous victory." The same holds good of the suffix *-ko* ('my'), but, on the other hand, we have in the suffixes of the first person plural (*-ay*, *-anay*, excluding the person addressed) and the second person singular (*-ao*, *-anao*), good firm syllables which may be used freely, and are happily the forms most needed in words of prayer. Charles Wesley's beautiful lines:—

Other refuge have I none;  
Hangs my helpless soul on Thee,  
are melodiously, if not fully, expressed by

Aiza handosiranay  
Afa-tsy ny elatrao ?

('Whither shall we flee if not to Thy wings?') A Malagasy reading these lines would naturally read them in rhythm, and, in singing, the firm *ay* and *ao* fit well to the final long notes of the music. It is necessary, however, not to use these syllables so freely as to spoil the sound by an undue number of *aos* and *ays*. This danger may be seen in two verses of an attempt to render Mr. Keble's hymn, "New every morning is the love :"—

Hirainay fihiram-baovao,  
Fa nentinao, ry Tompo ô,  
Natory tsara izahay,  
Ka notanjahinao indray.

Vaovao ny famindramponao,  
Ka saotranay hatao vaovao,  
Nampianay ny helokay,  
Fa voavelanao indray.

And unfortunately we have very few other firm syllables at the end of words. The forms in *oa*, as *sōa*, *tokōa*, *avokōa*, are monosyllabic enough for the purpose; so are those in *oy*, as *henōy*, *ampitombōy*, etc.; and we have a few active verbs with the accent on the ultimate, as *manomē* and *mandā*, and some few primitive roots available, as *ra*, *be*, *fo*; but a large majority of words throw the accent further back, and this points to our using metres with a full foot at the end of the lines, rather than those with one long syllable. Take the first two verses of a Christmas carol, a translation of the following:—

Waken! Christian children,  
Up! and let us sing  
With glad voice the praises  
Of our new-born King.  
Up! 'tis meet to welcome  
With a joyous lay  
Christ, the King of Glory,  
Born for us to day.

Zaza Kristiana,  
Asandratonao  
Feo hiderana  
Ny Mpanjakanao.  
Kristo Tompontsika  
Io Mpanjaka io,  
Teraka ho antsika,  
Ka mba ifalio.

Here the *nas* in the first verse and the *kas* in the second are safely disposed of on the unaccented notes. This little carol is translated by a native, and is very popular in some of our schools.

A further danger arises from those eminently Malagasy syllables, the final *ka*, *na*, and *tra*. It is this: some hymn writers have thought it possible to cut the *a* off entirely, making it of no account in the scanning. It is possible in cases when the *a* is followed by a similar vowel, as in the



specimen above, "*No monin(a) aminy*," where the two *as* properly coalesce into one syllable; but it is *not* possible where, by leaving out the vowel, two consonants are brought together which do not combine by the laws of the language. I give two instances of this from another of our Christmas carols, which is, in spite of these blemishes, deservedly popular:—

Koa mba aoka handeha isika,  
Ka hamboa panatitra,  
Fo madio sy herintsika,  
Fanajana sy vavaka.

He! ny mponina ao an-danitra  
No indray miredona;  
Andriamanitra maka nofo  
Mbamin-tsatan' olona.

Without entering on other criticism of these lines, I would point out that a Malagasy cannot pronounce *n* and *s* together, so that the words "*Fanajan(a) sy vavaka*" are inadmissible. They might, however, be written, "*Fanajan-tsy vavaka*," the *t* saving the pronunciation and the scanning together. But a worse error is to try and cut off the final *a* of *Andriamanitra*, thus bringing *r* and *m* together. The only way to sing this is to break the minim which properly belongs to the syllable *ma* into two crotchets, and to sing *ma-ni* to them; thus we have the next note for the syllable *tra*. But the ideal Malagasy poet of the future will find a way to avoid such collocations.

It may be said that we are setting up too high a standard, a standard to which some of the first English hymns do not attain. Undoubtedly Bishop Ken fell below it when he wrote:—

Glorÿ to Thee, my God, this night,

and

Under the shadow of Thy wings.

But these have been very properly changed in some hymn-books to "All praise," and "Beneath." Mr. Keble again wrote:—

Sun of my soul, Thou Saviour dear,

and

Abide with me from morn till eve,

in corresponding stanzas; but the variation is permissible in poetry intended to be read only, and a good musician setting these lines to music would vary the beat of his tune to suit them, as Dr. Dykes has done. At the best we shall probably always have to sing many faulty lines in Malagasy; the present writer only pleads that more persistent efforts should be made to give the people training in the rules of poetical and musical art.

On the second point mentioned above, much need not be said. The mind of the Malagasy is for the most part against short forms of expression. This shows itself in the address of a letter, which must always be, "*To so-and-so, at such a place*" (*Any. . ao. .*), or, as in a bill once brought me by my servant, in which every article of his marketing had the word *amidy*, to buy, between it and its price, thus:—

Threepence *to buy* fire-wood.  
Three halfpence *to buy* eggs.  
Sixpence *to buy* a turkey, etc.

If anyone sets himself to translate a hymn from the English, Latin, or I suppose, German, he will find that he needs many more lines in Malagasy, if he intends to give the full sense. Thus we have a very beautiful translation of Bonar's verses, "I heard the voice of Jesus say," but the three verses of the original have become six. The antidote seems to be: first, for intending hymn writers to choose very simple ideas and not try to express much in one hymn; and next, for the people to be taught that a language must modify itself in poetry, and that the full complement of articles and conjunctions is not absolutely necessary for understanding what is meant.

Turning from the question of *words* to be sung to that of the *music* to which they are to be sung, I should be wanting in the courage of my convictions if I did not express myself emphatically against what is generally called 'Malagasy singing,' as distinct from that introduced from Europe. There is no doubt that native congregations can join very heartily in the whinings and howlings which are called by that name, and that they find it very hard to get into any European method of singing. Nevertheless my view is that in the interests of advancement, and, I would add, for the glory of God in the sanctuary, it must be superseded. Do not lower an art which has been slowly perfected from the days of Palestrina and Purcell to those of Handel and Mendelssohn, to please the unformed tastes of a nation who only need some years of patient teaching to become a musical people indeed. A Malagasy child first learning arithmetic naturally writes his figures from left to right, beginning with the digits on the left hand, then the tens to the right of them, etc.; but no teacher of arithmetic has been bold enough to say that the recognized European method of that science should be modified to suit the Malagasy. To take another illustration: in music itself there is some unpleasant drudgery to be gone through before proficiency is acquired. "Don't give the child those crude scales to practise hour after hour. Let him pick out pretty tunes in his own way;" that is, in the way which a venerable friend of mine calls, "flopping on the harmonium." Very well, let the child "flop" by all means, but he will never become a musician or hold his own in competition with his fellows. I would desire to be at one with the best and wisest missionaries who have worked here, in consulting native taste and honouring native observance in every possible way, but I should cease to deserve the name of a teacher if I rested content with 'Malagasy singing.' In the matter of church hymns I would encourage the use of a certain number of what are called 'popular melodies,' as those from Mr. Sankey's book, or *The Crown of Jesus* music, but I would endeavour also to introduce some of a more solidly musical character, as those by Tallis, Orlando Gibbons, Crotch, and down to that prince of hymn-tune writers in our own generation, Dr. J. B. Dykes. And through hymn-tunes I would endeavour to guide the national taste on to higher fields, hoping that some of us may live to hear "The Messiah" or "St. Paul" well and religiously rendered in Antananarivo.

There is another matter to which I will allude, as having a possible bearing on the future musical history of this nation. An eloquent writer

has said that a cathedral may be called "a shrine for the Book of Psalms," for in the cathedral, those noblest of all hymns are rendered to melodious music, without omission and without cessation, month after month through the centuries. Perhaps many who read this paper will recall passing visits to Westminster or St. Paul's, or York or Exeter, and how, while the other music was grander, it was yet the chanting of the Psalms that especially refreshed their spirits and raised up their thoughts heavenwards. Surely to give such an opportunity to the Malagasy is an undertaking which may win the sympathy of all, even though their own conception of missionary work or of elevating influences may be a very different one. Such an opportunity it is hoped will be given in the stone church now rising in the midst of this city, on the north of Andohalo. The Church of England having come late into the mission-field of Madagascar, it may very properly be felt that her chief energies should be given to the more distant and unchristianized parts of the island, but here in the mother city must be her representative headquarters and mother church; and it may be that in future days, when history is written, this praise will be hers: that she translated for the people such ancient hymns (the property of all Christians) as the "Te Deum laudamus,"\* and that she especially taught the people to see in the chanted strains of the Psalter their KING suffering, rising, exalted. Such a witness she might well bear, not to those few alone who claim her membership, but to all who own the name of CHRIST. In preparation for such a work the Psalter is already arranged for chanting, and is set, for the most part, to single 'Anglican' chants of the ancient and modern schools; and many of the Psalms, as they recur in monthly course, are already sung in the temporary church. Is it a very distant ideal which fancies them really well rendered to organ accompaniment every day, and frequently listened to or joined in by many outside the bounds of the Anglican Mission? Is it a vain thought to hope to raise and elevate the Malagasy nation by such a means (among others), when one considers what a blessing church music of a high tone has been to many in England?

"How shall we sing the Lord's song in a strange land?" We *can* do it, and gladly, if we are helping in any measure to teach it to others who are "no longer strangers," but "fellow citizens" with ourselves. And if there are some here who long to visit England again, that they may hear

"—— once more in college fanes  
The storm their high-built organs make,  
And thunder music, rolling, shake  
The prophets blazoned on the panes,"

they may quench their thirst for church music by striving in their measure to make the natives here partakers in its mystic thrilling power.

A. M. HEWLETT.

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\* It may be remarked that the "Te Deum," translated into Malagasy, was set to music several years ago by Mr. W. Pool and published in a small book of Anthems issued in 1873. Also that the sublime hymn "Veni, Creator Spiritus" was translated by Rev. W. E. Cousins, and is to be found as No. 17 in the hymn-book used by the L.M.S. and F.F.M.A. congregations in Madagascar.—EDS.

THE CHANNELS AND LAGOONS OF THE EAST  
COAST OF MADAGASCAR.

IN a previous paper, I had the honour of laying before the Academy\* an outline of the hydrography of Madagascar, and of shewing that the watershed of the country, instead of dividing the island into two nearly equal portions, as was formerly thought to be the case, is situated much nearer the eastern than it is to the western coast. This division of the island into two river basins of unequal size arises from the position of the mountains, which, almost bathing their feet in the Indian Ocean on their eastern side, rise gradually by a series of slopes to a considerable height ; while on their western sides, their general descent is less abrupt, and a vast plain separates the central mass from the sea.

The rivers also which water the eastern region have a much shorter course than those which flow towards the west. They exist in considerable numbers, but their volume is small during a great part of the year, because, descending by very steep gradients, they only receive small tributary streams. Issuing from the mountains, they find a narrow plain against which the currents of the Indian Ocean impinge with violence ; these currents constantly tending to close up the outlets of the rivers with sand. And because the volume of water which they usually bring down is not large, the greater number of them are unable to open a direct passage into the sea. If, after a considerable flood, they sometimes force open the bar of sand which daily accumulates, and which the ocean currents maintain undiminished, the opening thus temporarily cleared is quickly re-formed as soon as the river floods decrease.

It follows therefore that these rivers not often having, at least between the 12th and the 23rd parallels, a direct and permanent outlet, attain a size and development in the plain which deceives one as to their true importance. From this cause also they send out, parallel to the coast, both to north and south, branches which, sometimes narrow, sometimes broad, following the level and the configuration of the ground, have usually a considerable length, and which, uniting with several others, discharge their waters into the sea by a common outlet, often situated at a great distance from the different streams which contribute to it.

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\* The Paris 'Académie des Sciences.'

Thus it comes to pass that these channels are found in every part of the eastern coast of Madagascar which is exposed to the great Indian Ocean current, from  $16^{\circ}52'$  of south latitude as far as  $22^{\circ}25'$ . From  $16^{\circ}52'$  to  $18^{\circ}13'$ , however, they are at a considerable distance from each other; and it is only between the mouth of the Ivondrona and that of the Mâtitanana that they become sufficiently numerous and near together to be utilized for coast navigation. Between these two rivers, along a total extent of 485 kilomètres [301 miles], there are twenty-two channels or lagoons, formed by more than fifty different streams.

These channels are of very varying dimensions: in some places they are so narrow that a canoe can with difficulty pass along, while in other places they widen out to from 200 to 300 mètres [220 to 330 yards] in breadth; and wherever any depression of the surface exists they become lakes, which are sometimes miles in length, and of which the most important and best known are Nòsivè, Andrànokòditra, Rasòamasay and Rasòabè, Fènoarivo, Ràngazàva, and Itampòlo. They are sometimes separated from the sea only by a simple belt of sand a few yards in breadth, sometimes by a grassy plain more or less covered with trees and shrubs, which measures several hundred yards, occasionally even several miles, in width. They are not, however, all navigable, at least at all times of the year, for in the dry season they contain more mud than water; still, such as nature has made them, they are very useful and do much to facilitate communication and the transport of goods along this inhospitable coast, where lighterage is impracticable from the violent currents and from the heavy surf which almost constantly prevails, and where, besides, there are neither ports nor anchorages where vessels can take shelter. We ought, however, to say, that this natural canal, so commodious in every respect, has its inconveniences from a sanitary point of view, for it renders the eastern plain a very hotbed of fever.

The one and twenty isthmuses which separate these channels, the *ampanalàna*, as the Malagasy call them—because they are obliged to take their canoes out of the water and drag them along the land to the next channel—have a total length of 46 kilomètres [ $28\frac{3}{4}$  miles], about one eleventh part of the whole distance; some of these measure only a few hundred yards, others are as much as from two to three kilomètres, and one of them is eight kilomètres [nearly five miles], across.

It was interesting from a geographical point of view to make a detailed survey of these channels and lagoons, for nowhere else, as far as my knowledge goes, can there be found so long

and important a chain as this. This survey, which I ~~made~~ with care by the azimuth compass, and which is verified by eighteen astronomical observations,\* is reproduced to a scale of 1—145,000 on the map which I am now completing.

On comparing this map with those which have previously appeared up to the present day, especially with the chart of the English Admiralty, one sees the considerable difference which exists between the former outlines, which are altogether imaginary, and those which are the result of my labours. In fact, in place of lakes of great size scattered hap-hazard all along the eastern coast, often at a considerable distance from the sea, and represented as without any communication with each other, this map shows, as I have said, narrow channels, almost continuous, which follow the shore closely, and which do not become wide except occasionally. The greater part of the towns and villages which are here marked have been shewn by me for the first time; and I have also rectified the position of localities shewn on previous maps, which places, except four,† were erroneously marked to the amount of from 15 to 20 kilomètres or more; for in one case, that of the Matitanana, the error was as much as 28', that is, about  $5\frac{1}{2}$  kilomètres! [ $3\frac{1}{2}$  miles.] These errors of position with regard to the mouths of important rivers and of towns frequented by Creole traders for commercial purposes, have often, in the case of captains of ships, been the cause of delays which are most prejudicial to the interests of their owners.

ALFRED GRANDIDIER.

SUPPLEMENTARY NOTE.—The above article has been translated from the French original, a paper contributed to the *Comptes Rendus des Séances de l'Académie des Sciences* of Paris, March 16, 1885, a copy of which was obligingly sent to me a few months ago by the author. A few additional particulars may be here given as to this remarkable chain of lagoons on the east coast of Madagascar. The "English tourist" referred to by M. Grandidier in a foot-note was Captain W. Rooke, R.A., who, in the months of April and May, 1864, explored the greater portion of these lagoons in a boat specially constructed for the purpose at Mauritius. Capt. Rooke was accompanied

\* This survey extends along all the coast comprised between the mouth of the Sôamiânina (lat. S.  $16^{\circ}52'15''$ ) and that of the Mâtitanana (lat.  $22^{\circ}24'15''$ ), with the exception of the part situated between Andôvorânto (lat.  $18^{\circ}58'$ ) and Mahanoro (lat.  $19^{\circ}54'13''$ ), a little over 550 kilomètres. An English tourist traversed in 1864 a part of the channels and lagoons of the east coast, but his account gives no exact information upon this very interesting subject.

† Andovoranto, Mahanoro, Mahela, and Mananjara.

by three other gentlemen ; and leaving Tamatave on the 24th of April, they reached Mäsindräno, at the mouth of the river Mänanjara, on the 29th of May. Capt. Rooke appears to have taken no instruments for the scientific mapping of the country he traversed, but he carefully noted the succession of channels, lagoons and lakes, full particulars of which are given in his paper entitled, "Boat Voyage along the East Coast Lakes of Madagascar" (*Proc. Roy. Geogr. Soc.*, Dec. 1865). Capt. Rooke's estimate of the proportion of land portage to water-way along the coast was a little less than one-tenth of the whole distance; he says that "in no case had the boat to be carried more than six miles from one lake to another; and frequently, to effect a junction between two of the lakes, it would only be necessary to enlarge a small water-course forming a connection between them." It is evident that with a comparatively small expenditure a continuous and commodious water-way might be made along 300 miles of coast, connecting the principal ports on this side of the island, and giving a great impetus to trade. By cutting less than 30 miles of canal, Ivondrona, a little south of Tamatave, might be connected with Andövöränto, Vätomändry, Mähänöro, Mahëla, Ambähhy, Mäsindräno and many other less important places, as well as with the interior up to the foot of the first Radäma, this great work was actually commenced; and a large number of men were gathered together to make the necessary cuttings to join the lagoons; but the death of that sagacious sovereign put an end to the work. It may be hoped that the present Government may feel itself able at no very distant date to recommence this undertaking. A great increase of trade and prosperity along the eastern side of the island would certainly result from the completion of this 'East Coast Canal.' It need only be added that some of the most beautiful scenery in Madagascar is to be found along the shore where these lakes and lagoons occur. The belt of land between them and the sea is covered with the freshest turf, and clumps of trees and shrubs scattered over the surface make it appear almost like an English park. On one side are the glassy waters of the lake, often spreading away for a mile or two to the west, with the blue ranges of the interior as a background; while on the other side are the magnificent waves of the Indian Ocean, with their ceaseless roar; and, further out to sea, is the almost uninterrupted coral reef, crested with foam, as the great rollers dash themselves into spray.

JAMES SIBREE, JUN. (ED.)

## \* BIBLE REVISION WORK IN MADAGASCAR.

COULD the readers of the *ANNUAL* have been introduced about mid-day on Wednesday, October 28th of last year, into the Committee-room of the London Missionary Society, which forms part of the great block of College buildings that are now such a conspicuous object on the Fàravóhitra hill, in Antanánarivo, they would have seen, seated round a long office table, seven European missionaries and two native pastors. At the head of the table is seated the chairman, the writer of the present paper; on his right are the Rev. L. Dahle, superintendent of the Norwegian Mission, Mr. H. E. Clark, of the Friends' Mission, and the Rev. T. T. Matthews, of the London Mission; on his left are seated the Revs. W. Montgomery and R. Baron, F.L.S., of the London Mission, and Bishop Kestell-Cornish, of the Anglican Mission; while opposite the chairman are Joseph Andrianaivoravelona and Andrianòny, both of them college-trained men of good ability and large experience. On the table are scattered books and papers, such as Polyglot Bibles, concordances, dictionaries, commentaries, and printers' proofs. The Committee met at half-past eight, and after a short prayer for help began its morning's work—viz. the Book of Malachi. The work has gone on steadily for nearly four hours, and now the solemn and awe-inspiring words that form the last paragraph of the Old Testament are reached, and the first revision of the Malagasy Bible is complete. Books are closed with a sigh of relief, and all faces are brightened by the consciousness that a great work has been accomplished.

Twelve years before this the Revision Committee began its work; but of the original members\* who took part in the work of the first session, only three are present this morning—viz. the chairman, the Rev. L. Dahle, and Pastor Joseph Andrianaivoravelona. At the suggestion of Mr. Dahle, all kneel round the table, and, with the revised version lying before them, unite in a few words of earnest and joyful thanks to God, and commend to Him the work upon which the labour of so many years has been spent, beseeching Him to make this new translation a stream of life and blessing to the Malagasy people.

But why has such a laborious task been undertaken? Did not David Jones and David Griffiths complete the translation of the Scriptures into the Malagasy language before the outbreak of the persecution? And did not their version, read in secret and at risk of liberty or life, sustain the faith of the little flock in Madagascar during a quarter of a century of repression and persecution? Yes, to the eternal honour of these two missionaries, and their colleagues, Johns and Freeman, who helped in the later stages of the work, be it said that, notwithstanding the multifarious duties devolving upon them, they did succeed in thus laying the foundation of Bible translation in the Malagasy language. David Jones

\* Present at first Session, December 1st—19th, 1873: Dr. Mullens, Rev. J. Pillans, visitors on behalf of B. and F.B.S.; Rev. W. E. Cousins, Principal Reviser, B. & F.B.S.; Revs. R. Foy, J. Sibree, and G. Cousins, L.M.S.; Revs. L. Dahle and M. Borgen, N.M.S.; Mr. J. S. Sewell, F.F.M.A.; Rainimanga, Andrianaivoravelona, and Andriambelo, native helpers.



reached Antananarivo in October, 1820, and David Griffiths in May of the following year. By the year 1824 they had made a fair start with their translation work, and by March, 1830, an edition of 3,000 copies of the New Testament was issued. Five years later (June, 1835) the Old Testament was completed, and the first edition was printed at the Mission Press in Antananarivo. All honour, then, to the two Welshmen who, by their noble work, have laid all future generations of Malagasy under the deepest obligation. But our work of revision was none the less necessary, because we delight to think of the good foundation laid by our honoured predecessors. The experience of Madagascar has been in no sense exceptional. The work of even such men as William Carey and Henry Martyn has not met all the wants of those for whose benefit it was undertaken. And so, in Madagascar, experience showed that much might be done to render the translation more accurate and idiomatic. Indeed, in all translation work, even success is but an approximation to perfection, and no translators, or bodies of translators, can claim finality for their versions. The present Revision Committee in Madagascar, though they hope, as the result of thirteen or fourteen years' work, to present to the Malagasy Christians a translation which all will acknowledge to be a great advance on what has gone before it, quite anticipate that some future generation of foreign or, perhaps, native scholars, may be able still further to revise and improve their present work.

Without entering into minute and wearisome details as to earlier movements in the direction of Bible revision, let me state briefly the origin, constitution, and work of the present Committee of Revisers. In the early part of the year 1872 it happened that there were present in Antananarivo representatives of all the Protestant societies having agencies in Madagascar, and the need of some united action was felt. The Bible would be used in all these Missions alike, and naturally all felt a desire to see the work of revision undertaken by a board that would fully and fairly represent the different interests involved. A conference was held on April 3rd, 1872, and, as a result of its deliberations, a formal application was made to the British and Foreign Bible Society to grant its sanction and help to the important work contemplated. The main features of the plan suggested to the Bible Society were: (1) the appointment of the present writer to the post of 'Principal Reviser,' to prepare a preliminary version, to preside at the meetings of the Committee, and to superintend the printing of its version; (2) the appointment of a representative committee composed of missionaries of all the Protestant societies in the following proportions: the London Missionary Society, three; the Society for the Propagation of the Gospel, one; the Church Missionary Society, one; the Norwegian Missionary Society, two; the Friends' Foreign Mission Association, one.

The British and Foreign Bible Society promptly and generously agreed to this joint proposal, and undertook the whole pecuniary responsibility involved—that is to say: (1) the payment of the salary of the principal reviser; (2) travelling expenses of the delegates; (3) the cost of native assistance; (4) the purchase of critical books and stationery; and (5) the printing of the proofs.

The consent of the Bible Society having been obtained, the next step was the appointment of delegates. As soon as these had been appointed, a preliminary meeting was held on July 24th, 1873, at the house of Mr. W. Johnson, of the F.F.M.A., who had acted as secretary to the conference. At this meeting several preliminary questions were discussed, and it was resolved that, instead of entering at once upon the general work, a tentative revision of a few selected chapters (*viz.* Gen. i.—iv.; Ex. i., ii., xx.; Ps. i.—v.; Matt. v.—vii.) should be made by the principal reviser, and that a session should be held for the purpose of discussing these portions and of ascertaining more in detail than could be done in general conversation how far the delegates were united in judgment as to the extent and character of the changes required. This plan, it was hoped, would simplify the work of the principal reviser, and give to his future labours greater definiteness and precision. This first session was held in December, 1873. Daily sittings of five or six hours were held for about three weeks, and the following portions were revised: Gen. i.—iii.; Ex. xx. 1-17; Ps. i., ii.; Mat. v. 1-22; vi. 9-13 (in all, 142 verses, or on an average about twelve verses per day).

The general work of revision on the lines laid down was now proceeded with, and, as will be seen from the foregoing description, comprised two distinct departments—*viz.* (1) the preparation of the preliminary version which was to form the basis of the work, and (2) the revision and improvement of this version by the united action of the Committee.

Of the preparation of the preliminary version the following is a brief description written soon after its completion on September 12th, 1884:—

“The last proof (Old Testament, No. 220, containing Zech. xi. 9—Mal. iii. 24) was finished on September 12th. This work of preliminary revision was begun in October, 1873, and has thus stretched over a space of eleven years. It did not, however, take the whole of this time; but deducting my absence on furlough (1876–1878), and the time spent in 1880 and 1881 in preparing ‘copy’ of the unrevised portions for use in the ‘Interim Edition,’ I think about eight years was the time actually spent on it. But it should be remembered that during the whole of this time about two days a week were taken up with the ordinary work of the Revision Committee.

“This tentative version has been prepared in a series of ‘Principal Reviser’s Proofs.’ These proofs were octavo in size, printed in clear type, with a wide margin for notes. Most of them contained eight pages, but a few extended to ten or twelve. The average number of verses in a proof was about 110. Two hundred and eighty-four proofs have been printed—*viz.* 64 of the New Testament and 220 of the Old Testament. The original arrangement was that three Old Testament proofs should be prepared for each one of the New Testament, and, at first, this plan was in the main followed. But after a time it was deemed desirable to proceed at once with the remaining books of the New Testament, and from July, 1880, to November, 1881, the Old Testament work was suspended, and the revision of the remaining books of the New Testament—*viz.* Acts to Revelation—was completed.

“My plan of working in preparing these proofs was to take a page of the Malagasy Bible pasted on a sheet of paper for notes, and compare this word for word with the original, using the best critical aids in my possession, and endeavouring, in the first instance, to make the translation as literal as possible. Every point that appeared doubtful I marked with a (?), and at the end of the week I went through these doubtful passages with my native

helper, Ralaiarivony. At the beginning, I had two natives to help me in this kind of work—viz., Ralaiarivony and Andriamamanga. Both of these belonged to the caste of *andriana* (or nobles). They had not enjoyed any special training, but were men of good general ability, and of very correct taste in matters affecting their own language; and as I wanted help chiefly in questions of idiom and taste, I do not think I could have made a better choice. During my absence in England Andriamamanga died, but Ralaiarivony has continued to work with me week by week to the end, and great praise is due to him for his patient care and good taste. In the earlier part of the work, it usually took us several hours to go through the passages I had marked thus (?); but as we advanced, and more points had been settled, and as I myself grew more accustomed to the work, this time was gradually lessened, until in the last portions we spent not more than an hour, or an hour and a half, in discussing the doubtful points that had arisen out of a week's work. Friday morning has for some years been the time usually devoted to this work, and the remaining hours of the day were generally spent in preparing clean copy for the printer.

"In looking back over the eleven years that have slipped away since I put my hand to this revision work. I have great reason to thank God for the enjoyment of health and strength. With very slight interruptions, I have been able to keep steadily at my work from week to week. During the middle portion of the work I often felt weary, and almost afraid I could not keep on till the end; but, on the whole, what I have done has been a labour of love and a source of much delight and instruction to myself. The work has grown upon us all, and we have found the Malagasy language much richer than we had imagined it to be, and capable of expressing many distinctions and shades of meaning we had supposed to lie beyond its range. Many more changes have been made than I originally thought would be necessary; but we have felt unwilling to leave anything that could by pains and care be brought nearer the original. My version has been very largely modified and greatly improved by the Committee; but I think it may be considered to have formed a useful basis for the united work, and to have facilitated the progress of the revision."

The work of the Committee has been from these preliminary proofs to build up what we earnestly hope will become a 'standard version,' which shall be received with confidence by all Protestants in Madagascar, and round which, as the years pass, shall gather sacred associations and loving reverence. At first the Committee held continuous sessions of several weeks each twice a year. But at the close of the third session a change of plan was introduced, and instead of holding sessions of several weeks' duration, the Committee agreed to sit one day per week, with an occasional session of a week or a fortnight, when arrears of work should render this necessary. These weekly meetings were begun February 2nd, 1875, and were continued without serious interruption till March 7th, 1876, by which time the Committee had revised as far as Exodus in the Old Testament, and to the end of Matthew in the New Testament. Owing to the fact that the principal reviser was about to leave for England on furlough, the work was then suspended.

As soon as possible after his return in 1878, the weekly meetings were resumed, and from November 14th, 1878, to October 28th, 1885, they were continued with a reasonable amount of regularity, and occasional continuous sessions were held at not unfrequent intervals. The rate of progress naturally varied much according to the character of the portion

under revision. In some of the earlier meetings of the Committee not more than ten or twelve verses were revised in a whole day. The largest quantity revised in a single day was 309 verses, but this is easily accounted for by the character of the portion revised (2 Kings xxv. 2—1 Chron. vi. 66). From sixty to a hundred verses was an average day's work.

Our plan was to meet at 8.30 a.m., and work three hours in the morning and three in the afternoon. The day's meeting was opened with a brief prayer, and we then proceeded to revise the portion for consideration verse by verse. We had with us usually three native helpers. The Committee sat on 433 days, and held in all 771 sittings, chiefly of three hours each. The work has been laborious and has been a heavy tax on our patience; but I think I may truly say we have attained a fair standard of exactness and thoroughness. The Rev. L. Dahle, of the Norwegian Mission, has been able to render the Committee most valuable help, especially from his full and exact knowledge of Hebrew and the cognate languages. In this department he has been *facile princeps*, and the translation owes very much to his untiring care and keenness of critical insight. But every member of the Committee has in his own order contributed to the final result, and the actual language employed is not the choice of any individual, but is the result of combined thought and discussion. Many of the happiest and most apt phrases the version contains have sprung unexpectedly to light in the midst of our discussions, and have at once commended themselves to our judgment. As a rule the wishes of the native helpers (within certain well-defined limits, which as faithful translators we felt bound to maintain) have been followed as to the actual form of the sentences, and even as to the choice of words; and hundreds of small changes have been made, which no foreigner would have thought necessary, and of which few would see the reason, purely out of deference to native opinion. I think every member of the Committee would heartily confess our obligations to our native brethren. We ourselves have learned much, especially as to the possibility of misunderstanding phrases that seemed to us quite clear, and as to undesirable associations lurking in unsuspected quarters. We have again and again been taught the danger of undue literalism, and have found what numberless pitfalls lie in the path of one who is dealing with a language not his own. Certainly a greater humility in estimating our own proficiency in the language should be one of the fruits of our long-continued work. No amount of familiarity with it seems to give us quite the instinct and taste of a native; and we have been saved from many an ambiguity and from not a few absurdities by the keener perceptions of our native co-workers. Malagasy translations of the Bible contain certain often-cited instances of the absurdities into which a translator may, alas! too easily fall. We have, for instance, a translation of Gen. iii. 13, which at any rate suggests the thought that the woman swallowed the serpent. So, too, from taking the common preposition *amy* to mean *with*, which in some combinations it may do, we have a translation of Gen. xxiv. 15, which says that Rachel came forth from her pitcher. In John ix. 1, one translation speaks of a man who had been blind from the time of his begetting a child *niterahany*

for *nahateràhany*). And in Acts xii. 7, the angel is represented as being more violent than we should think probable, as it is said that he kicked Peter's side! If we have been delivered from such serious misrepresentations (as I hope we have been, though I am by no means sure an ingenious native might not press out of some of our phrases an undesirable meaning), we certainly owe this very much to the care, quick perception, and patience of these native helpers.

As to the general character of our revision, I could not, of course, speak without partiality, as my whole time and thought have been absorbed in it for ten or eleven years. But I can say that our version is a *bonâ fide* attempt to represent faithfully the original Hebrew and Greek texts. While, however, we have endeavoured to be faithful translators, we have aimed not merely at fidelity to the words, but to the thoughts. There is a false literalism that destroys utterly the claim of the translation to be a faithful representation of the mind of writer. Our aim has been to steer between the Scylla of a mechanical literalism and the Charybdis of an over-free paraphrase. We have also kept before us constantly the fact that our version is being made for popular use, and we have tried to make the language as clear, intelligible, and euphonious as possible. With the valuable help of the natives we hope to produce a version that from its simplicity and purity of style, and its fidelity to the idioms of the language, shall be received with pleasure, and shall exercise an elevating and purifying influence on the literature of the future.

The remaining months we intend to spend on our work will be devoted to the general simplification and improvement of style from a native point of view. In order to finish the work by the middle of next year, and to prevent the necessity of handing it on unfinished to what—as so many members are leaving next year—would virtually be a new Committee, this second revision has been mainly left to myself and the three native brethren, the Committee exercising general supervision and holding meetings once in two months to decide on difficult and doubtful points. I fear our task, as even thus simplified, will not be completed in less than sixty or seventy sittings of six hours each; but the effect of this final revision will certainly be to render the style smoother, and to make it generally more acceptable to the native ear. The task is a very tedious one, but I think the result will amply repay us for our labour.

The fruits of our long-continued toil are yet to appear. Some portions of our translation—Pentateuch, Psalms, New Testament—in its first and incomplete form, have already appeared in the 'Interim Edition' (1882), and in the small edition of the New Testament (1883). On the whole, their reception has been favourable, and we are encouraged to believe we have done much to make the Bible more intelligible. But the final form of our translation will, especially in the earlier books, be a great improvement on those portions.

For the workers themselves, I can certainly say the toil has been a source of spiritual profit and enlarged knowledge. But beyond this there has been a most clear and manifest gain in bringing thus to a common work missionaries of various societies, with differing tastes and *convictions*. The editorial superintendent of the Bible Society, at the

inning of the work, expressed the wish of our English friends in the following words: "That no difference of opinion or policy in other matters may hinder the harmonious proceeding of the present work. It is indeed for men to co-operate when they feel that there is a real difference between them; but this Bible revision is a blessed opportunity for exhibiting to the island the unity of faith in the Scriptures as the authoritative declaration of God's will." And now, as we reach the close of our work and look back upon its progress, we see how this wish has been fulfilled. I may be allowed to quote here a few words from Bishop Kestell-Cornish's letter a few months since, informing that he was about to leave the island, and could no longer join with us in the work. He says: "I think it may be said without irreverence of our work together has illustrated the truth of the evangelical promise, that by *The Voice* the valleys shall be exalted, the hills brought down, the crooked made straight, and the rough places plain. And can I doubt that the result of our work, in which, however, I have borne my humblest share, will be a wider revelation of the glory of the Lord?"

WILLIAM E. COUSINS.

APPENDIX.

*List of Members of the Revision Committee.*

Name.	Society.	First attendance.	Last do.	Sittings attended.
Rev. William E. Cousins .....	B. & F.B.S.	July 21. 73		771
" Robert Toy .....	L. M. S.	July 21. 73	Oct. 28. 78	156
" James Sibree .....	L. M. S.	July 11. 73	Mar. 7. 76	159
		July 21. 73	June 5. 74	
" George Cousins .....	L. M. S.	Oct. 28. 78	Aug. 23. 82	244
" Henry Maundrell .....	C. M. S.	Never attended		—
" Alfred Chiswell .....	S. P. G.	Never attended		—
" Lars Dahle .....	N. M. S.	July 21. 73		507
" Martin Borgen .....	N. M. S.	July 21. 73	Feb. 22. 82	376
Mr. Joseph S. Sewell .....	F. F. M. A.	July 21. 73	Dec. 11. 74	96
Rev. R. T. Batchelor .....	S. P. G.	May 11. 74	Mar. 9. 75	148
" Benjamin Briggs .....	L. M. S.	Nov. 16. 74	Mar. 7. 76	102
Mr. Louis Street .....	F. F. M. A.	Feb. 2. 75	Mar. 7. 76	74
Rev. Francis A. Gregory, M.A. ....	S. P. G.	June 22. 75	May 8. 79	85
Mr. Samuel Clemes .....	F. F. M. A.	Oct. 28. 78	Nov. 2. 81	136
Rev. Charles Jukes .....	L. M. S.	Nov. 14. 78	Aug. 2. 82	209
" Harry W. Grainge .....	L. M. S.	Nov. 14. 78	May 3. 82	211
" Alfred Smith .....	S. P. G.	June 24. 79	Oct. 13. 80	84
Bishop Kestell-Cornish, D.D. ....	S. P. G.	Aug. 10. 81		91
Mr. Henry E. Clark .....	F. F. M. A.	Nov. 23. 81		279
Rev. Richard Baron .....	L. M. S.	July 19. 82		181
" William Montgomery ..	L. M. S.	Aug. 16. 82		215
" Thomas T. Matthews ..	L. M. S.	Jan. 17. 83		172

TE.—The date of issue of each division of the revised version of the Bible is given at the end of Mr. Sibree's *Madagascar Bibliography*.

## THE PERSONAL ARTICLE 'I' IN MALAGASY. 7

THE Rev. W. E. Cousins says, on p. 58 of his *Concise Introduction to the Study of the Malagasy Language*, that "variety of opinion has always existed as to the correct way of writing this prefix. With many words it is united, as in *Iläfy*. *Ikôto*bè. Père Weber gives three ways (*Dic. Mal.-Fran.*, p. 329; *Gram.*, p. 217):—(1) *Ny zanaky i Joary*; (2) *Ny zanaky Joary*; (3) *Ny zanak' i Joary*; to these may be added a fourth: (4) *Ny zanak' Ijoary*. This last seems the more correct." Four other ways of writing it may also be added: (5) *Ny zanak' ijoary*; (6) *Ny zanak' Ijoary*; (7) *Ny zanak' I Joary*; and (8) *Ny zanaky Ijoary*. Of these various ways, the second, which is the least correct of all, is the one now in use. I say "least correct," because the personal article, while it distinctly appears in Nos. 1, 3, 4, 5, 6, 7, and 8, becomes in (2) identical with a form which expresses the possessive.

But it is when the personal article is incorporated in the suffix *-ny* (which is very frequently the case), that the greatest objection to it arises. Frequently it gives a meaning quite the contrary of what is intended. Take the sentence: "*Nanao izany izy, ka niteny taminy Paoly nanao hoe.*" This, it is evident, may mean either: (a) "He did that, and said to Paul," or, (b) "He did that, and Paul said to him." Sentences that have come up occasionally in the Bible Revision Committee have been altered simply to avoid confusion in this particular; others, however, have escaped notice, thus 1 Chron. xx. 7 [first revision] runs thus: "*Ary nahaika ny Isiraely izy, ka matiny Jonatana, zanaky Simea, rahalahiny Davida.*" Here it does not appear whether the *lehilahy vaventy* mentioned in the previous verse was killed by Jonathan, or Jonathan by the *lehilahy vaventy*. Again, in the first chapter of 1 Kings there are the two following passages: ver. 38, "*Dia nidina Zadoka mpisorona . . . . . dia nampitaingina any Solomona ny ampondravaviny Davida mpanjaka.*" This, it is evident, may mean (a) that Zadok caused Solomon to ride on David's ass; or (b) that David caused Solomon to ride on his own (Solomon's) ass; or (c) that David caused Solomon to ride on David's ass. In verse 53 we have: "*Ary avy izy, dia niankohoka teo anatrehany Solomona mpanjaka.*" This may mean either (a) that Adonijah bowed himself to Solomon; or (b) that Solomon bowed himself to Adonijah. Many more such passages of uncertain signification doubtless occur in the revised version of the Scriptures and in other publications. It may of course be said with truth that the meaning of the *-ny* in such passages as the above could in most cases be gathered from the context; but is not that in itself a proof that the words themselves are not a faithful transcript of the thought they are intended to convey?

I have said above that the second form *Ny zanaky Joary* is the one now in use, but as a matter of fact even this is not consistently followed out. We see, for instance, *novorin' Ilehidama*, and *novoriny Lehidama*. In the Report of the Annual Meeting of the Bêtsiléo (L.M.S.) Mission for the year 1883, page 7, occurs the following sentence: "*Indrisy i fa mijamadika amy ny nataony Jaona ny nataon' Isoarojo.*"

The only objection that has been raised against the *I* or *i* being written separately, or conjoined to its noun, is that it is somewhat derogatory to the person to whose name it is prefixed. Especially is it objected to when used before the names of God or Christ. But if the *y* of *aminy* in the sentence *nankeo aminy Kraisty* is meant to express the personal article, which it certainly is, what less objection can there be to *y* affixed to *amin*, than to *I* or *i* prefixed to *Kraisty*? If it is not thought derogatory to utter the personal article in speech, it cannot be wrong to write it. Not only so, but the *I* is by no means necessarily a derogatory prefix. We say *Ikala* and *Ikoto*, it is true; but we say of the Queen, *Itompokovavy Ranavalona*, and of the Prime Minister, *Ingahy* (which, by the by, is more honourable than *Rangahy*). Then we have *iva-tiko*, *idada*, *ineny*, etc. But even though occasionally derogatory or familiar, it is not universally so. In such sentences as *anilany Kraisty* there is nothing derogatory, and yet there is no doubt that the *y* of *anilany* really represents the personal article *I*; then why not write it and avoid the ambiguity of the phrase? The form of writing this personal article is of course a matter of taste. By having the *i* or *I* separated from the noun, the name would stand unaltered, which would be an advantage. If it were employed only where we now have *-ny* as the sign of the ablative or possessive and as the suffix of prepositions, as *nokapohin' i Tomasy*; *mpanompon' i Petera*; *anilan' i Paoly*, it would be sufficient to avoid all the ambiguity which appears in *nokapohiny Tomasy*; *ipanompony Petera*; *anilany Paoly*.

The following passage (1 Kings ii. 30) illustrates the personal article in all the above forms:—

- 1) Ary Benaia tonga tao amy ny trano-lainy i Jehovah ka nanao taminy i Joaba hoe : Izao no lazain' ny mpanjaka : Mivoaha. Fa hoy izy : Tsia, fa eto hiany aho no ho faty. Ary Benaia nitondra teny tany amy ny mpanjaka indray hoe : Izany no lazainy i Joaba.
- 2) Ary Benaia tonga tao amy ny trano-lainy Jehovah ka nanao taminy Joaba hoe : Izao no lazain' ny mpanjaka : Mivoaha. Fa hoy izy : Tsia, fa eto hiany aho no ho faty. Ary Benaia nitondra teny tany amy ny mpanjaka indray hoe : Izany no lazainy Joaba.
- 3) Ary Benaia tonga tao amy ny trano lain' i Jehovah ka nanao tamin' i Joaba hoe : Izao no lazain' ny mpanjaka : Mivoaha. Fa hoy izy : Tsia, fa eto hiany aho no ho faty. Ary Benaia nitondra teny tany amy ny mpanjaka indray hoe : Izany no lazain' i Joaba.
- 4) Ary Benaia tonga tao amy ny trano lain' i Jehovah ka nanao tamin' i Joaba hoe : Izao no lazain' ny mpanjaka : Mivoaha. Fa hoy izy : Tsia, fa eto hiany aho no ho faty. Ary Benaia nitondra teny tany amy ny mpanjaka indray hoe : Izany no lazain' i Joaba.
- 5) Ary Benaia tonga tao amy ny trano lain' i Jehovah ka nanao tamin' i Joaba hoe : Izao no lazain' ny mpanjaka : Mivoaha. Fa hoy izy : Tsia, fa eto hiany aho no ho faty. Ary Benaia nitondra teny tany amy ny mpanjaka indray hoe : Izany no lazain' i Joaba.
- 6) Ary Benaia tonga tao amy ny trano lain' i Jehovah ka nanao tamin' i Joaba hoe : Izao no lazain' ny mpanjaka : Mivoaha. Fa hoy izy : Tsia, fa eto hiany aho no ho faty. Ary Benaia nitondra teny tany amy ny mpanjaka indray hoe : Izany no lazain' i Joaba.



- (7) Ary Benaia tonga tao amy ny trano-lainy I Jehovah ka nanao taminy I Joaba hoe : Izao no lazain' ny mpanjaka : Mivoaha. Fa hoy izy : Tsia, fa eto hiany aho no ho faty. Ary Benaia nitondra teny tany amy ny mpanjaka indray hoe : Izany no lazainy I Joaba.
- (8) Ary Benaia tonga tao amy ny trano-lain' I Jehovah ka nanao tamin' I Joaba hoe : Izao no lazain' ny mpanjaka : Mivoaha. Fa hoy izy : Tsia, fa eto hiany aho no ho faty. Ary Benaia nitondra teny tany amy ny mpanjaka indray hoe : Izany no lazain' I Joaba.

Personally I should prefer either the form (3) or (6), because in these the name stands apart, unchanged by the personal article ; the latter (6) is somewhat similar to our way of writing English names, as 'Mr.' Brown. At any rate, form (2), the one now in vogue, is the only one of the eight possible forms which disguises the personal article.

R. BARON (ED.).

## SIKIDY AND VINTANA :

HALF-HOURS WITH MALAGASY DIVINERS. (NO I.)

WHAT is *Sikidy* ? My Malagasy professor extraordinarius in this science gave a short and plain answer to this question, writing on the cover of his *sikidy* collection, "*Ny Baibôlin' ny Râzanay*" ("The Bible of our Ancestors"), and I am inclined to think that he has hit the nail on the head. I at least, after having lived in this country continuously for 16 years, have come to the conclusion that this nation has been much more under the spell of *Sikidy* and *Vintana* than under that of the old *idols*. These latter have, according to tradition, been introduced here comparatively recently, and there is certainly a good deal that tends to prove the correctness of this tradition. At any rate they have by no means got such a widely-spread and deeply-rooted influence over the whole nation as have *vintana* and *sikidy*. In many provinces even the most famous idols, as Kêlimalâza and Ramâhavàly, were comparatively very little known or cared for (Imèrina was chiefly their domain); but who did not fear the *vintana* (fate; or trust in the *sikidy* (divination)? If you want to look into the future, to detect secret enemies or dangers, to find out what is to be your lot of good or evil, the *sikidy* is the means of doing it. And the best of it is, that it does not, like the Fates or Parces of old, mercilessly leave you to your destiny, but kindly undertakes to avert the dreaded evils. If you are sick, the *mpisikidy* (the person who understands and practices the *sikidy*) does not at all—like many of our modern doctors—treat you 'tentatively,' which really means leaving you and nature to settle the matter between yourselves as best you can; neither are they shallow-minded enough to treat the case merely 'symptomatically.' As diligent men, they set to work immediately, and as truly scientific doctors, they first try to find out the cause of the evil, and then the means of removing it. And if they can give you no other benefit in a desperate case, they will at least cheer up your spirits

with a good assurance, generally terminating in a very emphatic phrase, to the effect that, "if you die, you shall be buried on the top of their head." And even if your spirit has actually left you, they do not give you up in despair, as I shall have occasion to point out in the following pages (cf. what is to be said about *'Fangalàn-kèò'*).

I am, however, reluctantly forced to admit that I am not able entirely to exculpate my friends from the accusation that there is a slight tinge of medical heresy about them, inasmuch as their whole *faditra*-system seems to rest upon the homœopathic principle, "*Similia similibus curantur*;" for the *faditra* (i.e. the thing the *mpisikidy* ordered to be thrown away to prevent or avert an evil) was generally something that in name, shape, or number, etc., was similar to the evil in question. E.g. if the *sikidy* brought out *'màty ròà'* ('two deaths'), two locusts should be killed and thrown away to prevent the death of two men; if it brought out *'mardry'* ('sick'), a piece of the tree called *hàzo mardry* ('a sick tree') should be made a *faditra*; cf. also *Malagasy Customs*, by Rev. W. E. Cousins, p. 34. But this, however, I do not intend to enter into any further here, as my object is only to point out what *sikidy* really is, and from whence it originated.

The people had a remarkable trust in their *mpisikidy* and their art; this appears even in the names by which they called them. Here in Imèrina and Bètsilèo it was quite common to style them simply *'ny màsina'* ('the holy ones'), a term which, however, did not so much imply sanctity as strength and superhuman power. In the provinces—especially in the south and west—they are generally called *ambiàsa* (*ambiàty*, *ombiàty*, etc.), as they were called among the Antanòsy at Fort Dauphin as early as the time of Flacourt; and this term is, as I have shown elsewhere,\* the Arabic *anbia*, 'prophet.'

*Sikidy* (Arab. *sichr*, charm, incantation)† has generally been translated 'divination,' but it has a somewhat wider sense, as it includes both the investigation of what is secret, and the art of finding out the remedy for it, if it proves to be of such a nature that a remedy is required; but the second depends on the first.

As will be seen in the following pages, there are three kinds of *sikidy* which are employed almost exclusively in finding out what is secret (*Sikidy miltòny tsangana*, *Sikidy tòkana*, and *Lòfi-tsikidy*), while the other kinds have more to do with remedying the evils. The first class, however, forms the *sikidy par excellence*, manipulated according to a rather intricate system; the second class depends upon it and seems to be of a somewhat more arbitrary character.

\* ANNUAL II., p. 87 (*Reprint*, p. 215).

† An anecdote will illustrate how much tempted the natives still are to trust the *sikidy*, or at least to think that some supernatural forces are at work in it. When my friend the Rev. Mr. Vig at Sirabè—who has collected most of the information I have had from natives about the *sikidy*—was employing an elderly man as his informant, this man was rather unwilling to enter into the subject, saying that it was a dangerous affair. And as Mr. Vig was shortly after this attacked by robbers and had a narrow escape, he declined to continue, exclaiming: "Did I not tell you that something would happen! The Devil is in it!" But a younger man, who had first frequented the 'High School for *Sikidy*' at Ambàtofinandrahana and then afterwards got a fair education with us, was less superstitious, and it was from him that both Mr. Vig and I got most of our information.

The *sikidy* rests on the *vintana* as its basis, and it is therefore impossible to treat of the former without to some extent dealing with the latter also. The *vintana* (Arab. *evinat*, times, seasons) means originally 'times,' and then the 'destiny' of a man, as depending on the times, i.e. either the destiny of a man's life 'his *vintana*', as depending on the time of his birth, or the fitness (or the reverse) of certain times for certain actions (e.g. a burial). The first one was the *vintana* proper, the second one was more accurately styled *San-andro* (literally, 'the hours of the day' (Arab. *sa'a* or *se'a*, hour, but also used in a wider sense of any moment in the present time), a term that will explain itself more fully in the course of this article.

But the supposed influence of the different times on the destiny of men depends again on the celestial bodies governing them. Therefore the *vintana* in its turn rests on astrology. The different days and months are each made to be connected with different constellations. And, as I have shown in former articles in this magazine, it is chiefly the 12 Signs of the Zodiac and the 28 'Moon-stations' (*Manazil-ul-kamari*) on which the Malagasy (originally Arabic) chronology and astrology depends, the former being applied to the months (ANNUAL II., p. 77—82), the latter to the days of the month (ANNUAL III., p. 131). When I add to this the seven planets of the ancients (i.e. including the sun and the moon, but excluding the earth and, of course, also the more distant planets, which were not then known at all), which play an important part in the *san-andro*, as will appear later on,—I have, I believe, enumerated all the astronomical elements in the Malagasy astrology and divination.

It would evidently seem to have been the most logical manner of treating the subject, first to have explained the astrology which is at the foundation of the *vintana*-doctrine, and then to have passed on to the *sikidy*, which is chiefly to be considered as the practical outcome of it. But against this proceeding I would object:—

(1) That the theoretical connection between the three things (astrology, *vintana* and *sikidy*) has already been lost sight of by the natives, and can in some respects scarcely be traced with certainty in details. What is left is a terminology in *sikidy* and *vintana* which evidently has been to some extent borrowed from astrology; while, on the other hand, the *mpisikidy* here had no idea themselves either of the nature of that astrology, or of its connection with their art of divination; in other words, the 'art' is still there, but the 'science' on which it was based is gone, and the original connection between the two can only partially be traced by means of the terminology.

(2) That the *mpisikidy* also had a good deal to do outside the domain of astrology and *vintana*, for they had not only to find out and, if necessary, counteract the influences of nature, but also those of bad spirits or bad men (*mpāmosavy*, sorcerers, from *mosavy*, sorcery, evidently the Arab. *meseya* and *mesavi*, an evil deed, from *sa'a*, to do evil, *akinla shaa*, to look upon one with an evil [invidious] eye).

After these preliminary remarks on the basis and object of *sikidy*, I shall proceed to explain the 'art of *sikidy*' under the following headings: (1) The Awakening of the *Sikidy*; (2) The Sixteen Figures of the *Sikidy*;

(3) The Sixteen Rubrics of the *Sikidy*; (4) The Erecting of the *Sikidy* (placing the figures in the rubrics); (5) The Working of the *Sikidy*: (a) The *Sikidy* of Identical figures; (b) The *Sikidy* of Different figures; (c) The *Sikidy* of Combined figures; (6) Miscellaneous *Sikidy*; (7) *Vintana* and *San'andro*.

I.--THE AWAKENING OF THE SIKIDY ('*Fôhan-tSikidy*'). The *sikidy* was generally manipulated with grains of sand, or beans, or certain seeds, especially those of the *Fàno* tree (*Piptadenia chrysostachys*, Bth.). When the *mpisikidy* had placed a heap of these seeds or beans, etc., before him and was about to perform, he inaugurated his proceedings with a solemn invocation, calling upon God to awaken nature and men, that these might awaken the *sikidy* to tell the truth. The following is the formula used, as obtained from my native informant:—

"Awake, O God, to awaken the sun! Awake, O sun, to awaken the cock! Awake, O cock, to awaken mankind! (*ôlombélona*.) Awake, O mankind, to awaken the *sikidy*,—not to tell lies, not to deceive, not to play tricks, not to talk nonsense (*mirtédiridy*), not to agree to everything indiscriminately (*hanatky be*); but to search into the secret, to look into what is beyond the hills and on the other side of the forest, to see what no human eye can see.

"Wake up, for thou art from *Silâmo be volo* (i.e. the 'long-haired Mohammedans'), from the high mountains, from Rabôrobôaka, Tapélakétsikétsika, Zâfitsimaito, Andriambavitôalâhy, Rakélihorânana, Iânakara, Andrianôni-solânatra, Vazimba, Anakandriananàhitra, Rakélilâvavôlo. Awake! for we have not got thee for nothing, for thou art dear and expensive. We have got (literally, 'hired,' *saràna*) thee in exchange for a fat cow (*tamà-nany*\*, a provincial word for a fat cow, is no doubt the Arab. *saman*, fatness = Heb. *shemen*) with a large hump, and for money on which there was no dust. Awake! for thou art the trust of the sovereign and the judgment of the people. If thou art a *sikidy* that can tell, a *sikidy* that can see, and does not (only) speak about the noise of the people, the hen killed by its owner, the cattle killed in the market, the dust clinging to the feet (i.e. self evident things), awake here on the mat!

"But if thou art a *sikidy* that does not see, a *sikidy* that agrees to everything indiscriminately, and makes the dead living and the living dead, then do not arise here on the mat."

This solemn invocation being finished, the diviner begins to 'work the *sikidy*.' Before explaining the mode of working it, I must give the 16 figures of the *sikidy*, which must be known before the working of it can be understood. But before so doing, I will offer a few remarks on the preceding invocation.

It is evident that the *sikidy* was looked upon as the special means used by God for making known His will to men; and it is at the same time characteristic enough that it was thought necessary to 'awaken' God (see the same idea in 1 Kings xviii. 27). In the long list of persons through whom the people here have got the *sikidy*, are the *Silamo* (Mohammedans [from 'Islam'], and then chiefly Arabs, who are also called *Karàny*, 'readers,' i.e. those who read the *Koran*); and it agrees well with this, that Arabic words occur even in this exordium (e.g. *lamanany* and also *saràna* (=Arab. *ajara*, to hire; same root as *sàra* in *sàran-dàkana*, fare), and still more in the terminology I am about to give and

\* Not simply 'a cow,' as stated in the Dictionary.

explain in the following pages. Most of the names in the list above, giving the 'authorities' from whom the Malagasy have received the *sikidy*, are rather obscure. The Anakandriananahitra is, I presume, the same mythical personage who is elsewhere called simply Rānakandriana (or Anakandriana), a ghost that used to haunt some famous caves in Imerina (e.g. one at Fandāna, to the east of Ambóhimānambōla), and from whom, according to one tradition at least, both the *sikidy* and the *sāmpy* (idols) originated. When also the Vazimba are mentioned, I suppose it is because the diviners were anxious to have the *sikidy* connected with everything that was mysterious and pointed back to the mythical days of old; but it may also be that the Vazimba really were the people who first received the *sikidy* from the Arabs, and that the other tribes in their turn got it from the Vazimba. One of the names at least (Andriambavitoalahy) occurs in the old tale of 'Ibonla,'\* in the life of whose hero the *sikidy* plays a very prominent part.

I may add that individual *mpisikidy* of any reputation seem each to have had their own form of address to the *sikidy* before working it, or at least they took the liberty of making considerable variations in the wording of it, although its general bearing seems to have been very much the same.

II.—THE 16 FIGURES OF THE SIKIDY ('*Ny Sikidy 16 Anarana*'). Having finished his address, the diviner began to work the *sikidy* (literally, 'raise it up,' *manāngan-tsikidy*), taking beans or *fano* seeds, etc., and arranging them on the floor (on a mat) according to rules we shall explain presently. These beans or seeds we must represent by dots. They were the following:—

<i>Hova.</i>	<i>Sakalava.</i>	<i>Arabs of E.Co. of Africa.</i>
1. :: Jamā (or Zomā) .....	Asombōla	Asombola
2. :: Alāhizāny .....	Alizāha	Alahoty
3. :: Asóralāhy .....	Asóralahy	Alasady
4. :: Votsira (=Vontsira) .....	Karīja	Tabaty horojy
5. :: Taraiky .....	Taraiky	Asaratany
6. :: Sāka .....	Alakaosy	Tabadahila
7. :: Asóravāvy .....	Adabāra	Afaoro
8. :: Alikísy .....	Alikisy	Alijady
9. :: Aditsimā (Aditsimay).....	Alatsimay	Alizaoza
10. :: Kizo .....	Alakarābo	Alakarabo
11. :: Adikasázy .....	Bétsivóngo	Adizony(=Adimizany?)
12. :: Vānda mitsāngana (=Mikarīja) Adálo		Alahamaly
13. :: Vānda miōndrika (=Mōlahidy) Alahōtsy		Alakaosy
14. :: Alokōla .....	Alikōla	Adalo(?)
15. :: Alaimōra .....	Alihimōra	Alihimora
16. :: Adibijādy .....	Alabiāvo	Bihiava

\* See my *Specimens of Malagasy Folk-lore*, p. 125.

The names in the first row are those that were in use in the interior. The order in which they are given by the different authorities differ to some extent; but as nothing depends upon the order, I have followed the one that seems most systematic, commencing with the fullest form ( :::: ), and taking away one bean (dot) for each figure until only four are left ( :: ), and then adding one again to each, by which proceeding we get the first eight figures. The next eight are formed by placing twos and ones in various combinations. The theory of the whole is evidently that not more than eight beans can be used in any figure, and that all of them must contain four in length, while there may be two or one in breadth. It follows of course that only 16 figures or different combinations are possible.

The names in the second and third rows I obtained from an Arab trader, who has spent most of his life in East Africa and on the west coast of Madagascar. As he left Arabia when only twelve years old, he could give me no information with regard to the practice of *sikidy* in his native country; neither did he seem to feel quite certain as to the correctness of all the information he gave. I have added a query to the names with regard to which he seemed to hesitate most.

Flacourt\* gives us a list of 16 'Figures des Geomance,' as in use among the tribes in the vicinity of Fort Dauphin more than two hundred years ago. He does not, however, really give the very figures, but only their names, to which he adds a Latin translation, viz. :—

Alahotsi, <i>acquisitio</i> .	Alacarabo, <i>puer</i> .
Adalou, <i>amissio</i> .	Alicozaza, <i>Alimiza, puella</i> .
Alihiza, <i>letitia</i> .	Adabara, <i>major fortuna</i> .
Alinchissa, <i>tristitia</i> .	Alaazadi, <i>minor fortuna</i> .
Alacossi, <i>caput draconis</i> .	Assomboulo, <i>populus</i> .
Cariza, <i>cauda draconis</i> .	Tareche, <i>via</i> .
Alohomoré, <i>albus</i> .	Alissima, <i>conjunctio</i> .
Alibiauou, <i>rubeus</i> .	Alocola, <i>carcer</i> .

He adds that "all these figures have the same meaning and power as are attributed to them by the authors of Europe." As it would almost amount to an insult to my readers to suppose that any of them are ignorant of what "the authors of Europe" teach with regard to geomancy, I shall of course abstain from commenting upon this very conclusive information! We can see at a glance that many of his names are identical with those used in the interior: Alihiza, Alacossi (=Alikisy?), Alohomore, Tareche, Alissima (=Aditsimà), and Alocola; while others can be identified with those in the 2nd and 3rd rows on the opposite page, as Alahotsy, Adalou, Alakarabo, Adabara, Assombola, Cariza, Alaazadi (=Alijady), Alabiliauou (=Alabiavo and Bihiava), and Alimiza (=Adimizany?). Only two remain, Alinchissa and Alicozaza, which last, however, has another name (Alimiza), the identification of which seems a little doubtful; but I think Alinchissa is=Al-kizo, and Alicozaza=Adikosajy. If so, all of them are identified.

Flacourt is quite aware that the *ompisiquili* (*mpisikidy*) had their wisdom from the Arabs, as he states that they were very clever in writing

\* *Histoire de la Grande Isle Madagascar*; Paris: 1661; p. 173.

with Arabic characters, and adds that they used to learn also a good deal of the language together with the characters, and frequently wrote chapters of the Koran on the books they made use of in their art. He even gives us a complete list of ecclesiastical orders of the *ombiasy*, with Arabic names, but amusingly mistranslated; *catibon*, for instance, he says means a bishop; it is of course the Arabic *ketab*, a clerk, a writer. And the translations he adds to the 16 names of *sikidy* figures quoted above is not much better; Tareche (Arab. *tariq*, way), however, he translates correctly. As a good many of these names are exactly the same as those of the Malagasy months, which Flacourt on the very same page correctly identifies with the names of the constellations in the Zodiac, it is the more strange that this should have escaped his notice, and that he should have mistranslated them as he does (Alahotsy is=Pisces; Adalou is=Aquarius; Alaazadi is=Capricornus; Alacossi is=Sagittarius; Alacarabo is=Scorpio; Alimiza is=Libra; and Assombola is=Virgo). As to the others, there was nothing to guide him, since he did not know Arabic. And even if he had known it, he might have felt greatly embarrassed when dealing with words which have undergone such changes that their origin can scarcely be traced, and have besides often through usage acquired a meaning with regard to which their etymology is no guide. It is easy enough to see that Alohomoré does not mean 'white,' as Flacourt gives it; its sound points to *al-ahamar*, the 'red one;' but I have a suspicion that it is a corruption of Alahamady (Aries in the Zodiac, used as the name of a month here in the interior), and written Alahemali in Flacourt (*d* and *l* easily interchange in Malagasy), a form that might easily become Alohomoré, as *l* and *r* are frequently interchanged in Malayo-Polynesian languages. I do not, however, intend to enter more fully into the question of the meaning of all the names given by Flacourt; I have mentioned this only by way of illustration. On the whole, I believe that nearly all the names he has given refer to the heavenly bodies. As to many of them, I have already pointed out that they refer to the constellations of the Zodiac. Adabara is beyond doubt the first moon-station in the month Adaoro (Ad-daharanu; see ANNUAL III., p. 131); Alocola seems to be=Alikili, the third moon-station in Adimizana (Libra), and Alissimà=Assimàka, the second moon-station in Asombòla. The remaining five (Alihiza, Alinchissa, Ceriza, Alibiauou, Tareche) I am unable to identify with any star or constellation.

Returning to the 16 names in use in the interior, we see at a glance that they differ greatly both from those in use on the west coast and those given by Flacourt. Some are partly Malagasy, whilst most of them are entirely Arabic. I shall take them in order and offer a few remarks on each:—

1. *Jamà* is evidently the Arabic *jamà*, union, i.e. the figure in which all the beans (8) that can possibly occur in any of these figures are united. In the others only 4 to 7 occur. The Arabic root *jamà*, to unite, to congregate, is the same as in *Zomà* (Friday, literally, 'congregation,' i.e. day of congregation). In Flacourt, as well as on the west coast and among the Arabs (?), this figure is called Asombola (Virgo). The name *Jamà* evidently only refers to the *shape* of the figure, entirely disregarding the astrology which is at the root of it.

2. *Alahizany*, Flacourt, Alahiza. In Arabic *al-ahzanu* means etymologically 'grief.' But what astronomical meaning it may have besides this, cannot tell.

3. *Asoralahy* is very obscure. Its first part, *Asora*, seems to be the Arabic *as-sahr*, the month, a root which occurs in many other Malagasy month-names, especially in the provinces. In Imerina we have *Asàramánitra* the 'fragrant month') for the Fandròana month. In the provinces we have *Asàramànara*, *Asàramànitsa*, *Asàrabè*, etc. But whether the last part of the word is the Malagasy *lahy* (masculine) or not, I dare not say.

4. *Asoravavy* I take next because of the apparent similarity of its etymology, although this is not always its place in the *sikidy* arrangement. *Asora* is 'month,' and *vavy*, if Malagasy, would mean feminine, 'the feminine month,' as the former would be 'the masculine' one.

5. *Votsira* or *Vontsira*, which the Sakalava call *Karija*, and the Arabs in East Africa, *Tabaty horofy*, is probably the *Cariza* of Flacourt. This last word is perhaps a synonym to Alahamady, for *karaz* or *kuraza* in Arabic (Syr. *koazo*) means a ram, especially the one that carries the bell and leads the way; for Aries (*al-hamalu* [=Alahamady], the wether) was by the ancients considered the leader of all the animals in the Zodiac.

6. *Taraiky* is at any rate the Arabic *tariq*, way. But what astronomical meaning it may have besides, I cannot tell.

7. *Saka* is also the provincial name for a month, and I believe it is a synonym for Adalo, which as an astronomical term means the Aquarius of the Zodiac, and then the 11th month of the Malagasy year. Adalo (Arab. *ad-dalvu*) properly means a water-bucket, and then, as an astronomical term, Aquarius. *Saka* is a popular name for a water-carrier, and when the Malagasy put *Saka* for Adalo, they only did what we do when we speak of 'the Great Bear' instead of *Ursa major*. We have the same root in the verb *nantsaka* (the root of which is *saka*, not *tsaka*, as given in the Dictionary), to draw water.

8. *Alikisy* is, I think, the same as Alakaosy (Sagittarius of the Zodiac, 9th name of the 9th month).

9. *Aditsimà* (Aditsimay) the Malagasy evidently understood to mean 'a little that does not burn.' I suspect it to be a corruption (with transposition) of Adimizany (Libra in the Zodiac, and the 7th month). It might, however, be *As-simàk*, a synonym to Alohotsy=Pisces.

10. *Kizo* I cannot explain at all.

11. *Adikasajy* is equally obscure.

12. *Vanda mitsangana* (=Mikarija); and

13. *Vanda miondrika* (=Molahidy). That *mitsangana* means 'standing,' and *miondrika*, 'bowing,' everybody knows; but what *Vanda* is, I cannot tell. *Mikarija* may be the Arabic *mikrez*, an awl. *Molahidy* looks very like the Arabic *malahadu*, thrusting, beating, affliction; but it might as well be a corruption of the Arabic *molid*, nativity.

14. *Alokola*, which the natives sometimes turn into *àloka' òlona* ('shade of man'), seems to be the Arabic *Alikilu*, the 17th of the moon-stations (the 10th one in Adimizana).

15. *Alaimora*; according to Malagasy etymology this would mean, 'taken gently.' But as the older form given by Flacourt is 'Alohomoré,' and some of the natives here say 'Alahamora,' I feel sure that the *h* is original, and that the word is an Arabic one. It looks like the Arabic *al-ahmaru*, which does not, however, as Flacourt thinks, mean *white*, but *red*. But I do not at all feel sure that it is not, after all, only a corruption of Alahamady, as have already hinted at in another place.

16. *Adibijady* seems to be a curious composition, or rather, juxtaposition,



of two Arabic names for 'goat.' *Yady* means 'goat' and Capricornus, and, with the article and a little corruption, this gives us *Adijady* (a Malagasy month-name). *Adibi* appears to be the Arabic *ath-thabi*, the goat. Probably both of them have been used promiscuously for Capricornus, and then were joined into one word.

III.—THE 16 RUBRICS OF THE SIKIDY ('*Ny Sikidy 16 Rny*', 'The 16 mothers of *sikidy*'). To the 16 figures of the *sikidy* correspond the 16 rubrics\* or places in the arrangement of the *sikidy*, one being placed in each rubric, not, however, that all of the figures must necessarily occur. More rubrics may perchance get the same figure, as this depends only on hap-hazard. If we arrange the rubrics in the manner usual in the practice of *sikidy*, we get the following table:—

		Ost Vohitra Fahatelo (=havany)		Harena		Taïé Akoho Voromboahazo			
		•	•	•	••			Zatovo	
		•	•	••	•			Marina	
		•	•	•	••			Vehivavy	
		•	••	••	•			Faha- valo	
		•	•	•	•			Tatovo an-trano hafa	
		•	••	•	•			Marina do.	
		•	•	••	•			Vehivavy do.	
		••	••	•	••			Firiariavana do.	
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he others seem to be considered as accessory and of secondary importance. Some of them are simply repetitions, with this only difference, at they refer to things in another man's house, not in that of the querter for whom the *sikidy* operation in question is undertaken. Others are placed to the left side of the lower square and at its two corners.

As I have thought best to give the native names of the rubrics above, shall now enumerate and translate them, adding an explanatory note to some of them.

1. *Tall*. This word is not Malagasy. I have no doubt that it is Arabic, though the explanation may be doubtful, as there are many possibilities with regard to its derivation: In Arabic *tala* means 'to ascend,' and in the 3rd conjugation (*tāla*), to make a thing ascend from the abyss of darkness and obscurity into light, to investigate, to explore, to enquire into; from hence we get the noun *talla*, explorer, investigator, which corresponds exactly with what the *Tale* in *sikidy* really is, as it always represents the person or thing concerning whom (or which) the enquiry is made. But I admit that other derivations from the same root (as *fulia*, good fortune, microscope, etc.) might be suggested.

2. *Harina*, property, is a Malagasy word; and so is

3. *Fahatelo*, the third one. My native informant says that *Fahatelo* here presents the relations of the *Tale*, the one for whom the enquiry is made.

4. *Vohitra*, town, village, is Malagasy too. These four all represent the person or thing concerned in the *sikidy*. If the thing in question is of such nature that it can fairly be considered as falling under the headings 'property,' 'relations,' or 'village,' one of these rubrics is chosen to represent; but if it is a person (not a slave, for his position is under the 'property'), upon the whole, anything that cannot be grouped under any of these three adings, it comes under *Tale*.

5. *Zatvo*, a youth, a young person, is Malagasy.

6. *Marina* (or *mariny*), a slave. This word is an etymological puzzle; it is at any rate neither Malayan nor African. The Arabs generally use *id* (the provincial Malagasy *abily*) for a slave; I cannot but think that *arina* must be the Arabic *marûna* (plur. of *marun*), 'men,' especially with the idea of 'strength.' It was probably used by the Arab slave-traders as a term by which they recommended their slaves as strong masculine fellows. In this manner it may have been introduced amongst the coast tribes, who have no other slaves than those they have bought from the Arabs. Here in the interior the word is only used as a technical term in the *sikidy*, and was most likely introduced here through the medium of the inhabitants of the coasts.

7. *Vihivavy*, woman, is Malagasy; and so also is

8. *Fahavalo*, enemy. In the repetition of the same terms (only referring them to another house), the diviners use *Firiariavana* in its place, and in a similar sense. This latter is not a Malagasy word at all; I believe it to be the Arabic *firâru*, the running away from, or escaping, an enemy, and then, in general, to move, walk, run.

9. *Trano*, house,

10. *Lalana*, way, road,

11. *Mpanontany*, an inquirer,

} all Malagasy.

12. *Asototany* is to all appearance like the name of Cancer in the Zodiac; but still I should doubt whether it is the same word. The natives often put *Andriana* (nobleman, or king) instead, and sometimes *Razana* (ancestors) as equivalent, which makes me think that *As sultani* (Arabic for sovereign, emperor, sultan) is the original form, and that it has been changed uncon-

sciously into *Asorotany* to make it like the word the Malagasy already knew as the name of a month.

13. *Andriamànitra*, God, is Malagasy.

14. *Nia*; not a Malagasy word at all. There is probably a root *nia* in Malagasy in the sense of error (verb *mania*, to wander about, then, to err, —generally referred to a root *sia*, because the reduplicated form is *maniasia*, while neither *nia* or *sia* are in use except as root of this verb; but as *nia* in Melanesian means error, sin, I think *nia* is the true root, and the *s* an inserted consonant of dissimilation), and also an introduced Arabic one meaning intention (Arab. *niya*=*intentio*, *propositum animi*); but none of these seems to correspond to the *nia* in the *sikidy*. For this last one the diviners sometimes put *Hanina* (food), evidently regarding this as is equivalent. This puts us on the track. It seems to be the Arabic *ni* (or *niun*, with the '*Tanwin*'), which means meat, especially underdone meat (*caro semicotta*). The reason why this rather strange term should be used, I cannot tell. Perhaps there is something at the bottom of the *sikidy* theory that justifies it.

15. The two remaining ones are Malagasy, viz. *Màsina*, the holy one, is a general epithet applied to the *mpisikidy*, and here it stands for his name.

16. *Fahasivy*, the ninth, for which term sometimes *ràno* (water) is substituted. This I cannot explain to my satisfaction. *Fahasivy* is sometimes used in the figurative sense of 'the departed,' 'the spirits of the dead;' but what has that to do with *rano* in the sense of 'water'? If we could suppose *rano* to be only a corruption of the Arabic *runna* (*populus, homines*), or of *rana* (*spectaculum*) in the sense of an apparition, it would at any rate give us a better equivalent for *Fahasivy* in the sense of 'the departed ones,' but this is, I confess, only a guess.

The remaining names not included in the 16 seem to be Malagasy (cf., however, *kororotsy*). They are the following:—

1. *Biby ratsy* (= *Kàry*), a bad animal (= a tabby cat).
2. *Tsi-nàhy* (= *vina ho avy*, my native informant says is the unexpected, the future; *vina* is the Arabic *evina* [*evinat*], pl. of *en, evan*, time, season, probably the same word as *vintana*).
3. *Kérorotsy*; if this is a Malagasy word, it means sliding, gliding; but I doubt it. Perhaps it is the *Cariza* of Flacourt.
4. *Olon-dràtsy*, bad men.
5. *Alika*, a dog.
6. *Tsinin' ny vèlona*, the blame of the living.
7. *Tsinin' ny mâtý*, the blame of the dead.
8. *Ra be mandriaka*, much bloodshed.
9. *Osy*, a goat.
10. *Ondry*, a sheep.
11. *Akôho*, a hen.
12. *I'èrombiàhàzo*, the name of a bird, but what kind I cannot tell.
13. *Tsi-éfa*, what is not done or finished.
14. *Màmo-héfa* probably stands for *mamo-efa* (?), tired of doing (?), or, rather, tired of what is done (?).

To these remarks on the names of the rubrics, I must add a few hints as to the manner of reading (examining) the figures put into them, viz.:—

1. The four first ones (*Tale*=*Vohitra*) and the eight below (*Trano*=*Fahasivy*) are to be read from above downwards (vertically).
2. The eight to the right (*Zatovo*=*Fahavalo*, repeated twice) are to be read from right to left (horizontally).

3. The four to the left (*Kororosy*=*Tsinin' ny velona*) are to be read from left to right (horizontally).
4. Those at the two corners to the left are read in a peculiar manner, viz.:
  - (a) Two of them (*Tsi-nahy* and *Tsinin' ny maty*) are read in a straight line (a diagonal) from one corner to the opposite one.
  - (b) The other two (*Biby ratsy* and *Ra mandriaka*) are to be read in curved lines, each of them taking in two of the middle squares of the larger square to which they long and terminating respectively at the two ends of the rubric *Andriamanitra*, each of them on the same side on which they commenced.
5. Two (*Ondry* and *Akôho*) of those on the two upper corners of the permost square are to be read from the corner where the name is placed to the opposite corner below (in a diagonal, just as in No. 4, a). The same is the case with the two other corner figures, *Tsi-efa* and *Mamofa*, only that the last one is read from below to the opposite corner above.
6. The two other corner figures above, *Ondry* and *Voromboahazo*, are to be read in the manner described under No. 4, b.

IV.—THE ERECTING OF THE SIKIDY ('*Fânangànan-tSikidy*,' i.e. the erecting of the figures in the rubrics). In the diagram at the beginning of the preceding section I have filled all the rubrics with figures as a *mpisikidy* would do, only that I have used dots to represent his beans or seeds. I shall now try to give the rules for this 'erecting of the sikidy.'

1. The first four rubrics (*Tale*—*Vohitra*) are filled with figures in the following manner. From the heap of beans before him the *mpisikidy* takes a handful at random, and from this handful he takes out two and counts till he has either two or one left. If two are left, he puts two beans, if one, one bean into the first (upper) square of *Tale*. In the same manner he fills the remaining three, and then proceeds to fill *Harena*, *Fahatelo*, and *Vohitra*, square by square, from above downwards.

When these four rubrics—all representing the person or thing arising whom or which the *sikidy* is made—are filled in the manner prescribed, the remaining eight are filled by a combination of these, or of others that have already been filled by a combination of these. This is done in such a manner that two figures are chosen and compared square by square from above downwards. If this combination gives *dissimilar* numbers (i.e., if one of the two combined squares has one bean, and the other two), only one bean is put in the corresponding square of the new square to be formed; but if it gives *similar* numbers (i.e. if the two combined squares both contain one, or both two beans), two beans are put into it.

These combinations are subjected to the following rules:—

- 1) *Tale* and *Harena* (i.e. a combination of the two in the manner prescribed) form (*mamoaka*) *Lalana*.
- 2) *Fahatelo* and *Vohitra* form *Asorotany*.
- 3) *Lalana* and *Asorotany* form *Mpanontany*.
- 4) *Zatovo* and *Marina* form *Nia*.
- 5) *Vehivavy* and *Fahavalo* form *Fahasivy*.
- 6) *Nia* and *Fahasivy* form *Masina*.
- 7) *Masina* and *Mpanontany* form *Andriamanitra*.
- 8) *Andro* and *Tale* form *Trano*.

A glance at the diagram I have given will show that all the eight figures below have actually been formed according to these rules. If we, for instance, compare *Tale* and *Harena*, from which *Ldlana* is to be formed, we get dissimilar numbers all the way, as all the pairs of squares have one and two, and consequently *Ldlana* gets only one bean in all its squares. Exactly the same procedure—*mutatis mutandis*—takes place in the filling in of the remaining seven rubrics below.

V.—THE WORKING OF THE SIKIDY. When the *sikidy* is erected in the manner described above, the question arises: What is to be done with it? How to work it so as to get an answer to your questions, a medicine for your sickness, or a charm against the evils of which you may be apprehensive, etc.?

Let me remark at the outset, that the *sikidy* properly deals with *questions* put to it. To answer these is its proper function. But if you ask what is the root of an evil, or the means of removing or averting it, etc., the answer will of course point out to you the cure of your evils as well, and so far, appear as *ars medica*. There are, however, kinds of *sikidy* in which no question is put, but the remedy or prophylactic against the evil is proposed at once. But as these are rather different from an ordinary *sikidy*-process, I shall treat of them in a separate section. What concerns us now is, the *ordinary sikidy*, the business of which is to give us answers to our questions.

The first thing we have to examine, after having 'erected the *sikidy*' is, what figure we have got in the rubric *Andriamanitra*; for out of the 16 figures, there are only 8 (*Jamà, Taraiky, Vanda mitsangana, Vanda miondrika, Alokola, Aditsima, Asoralahy, Asoravavy*) that 'agree' with *Andriamanitra*. These are called the 'Nobles' or 'Kings' of the *sikidy* ('*Andrian' ny sikidy*'), whereas the remaining 8 are called the 'Slaves' of the *sikidy* ('*Andevon-tsikidy*'). If you happen to get any of the latter in the said rubric, the *sikidy* is said to be '*folaka*' (literally 'tamed,' i.e. invalid), and you have to destroy the whole and begin anew; for your *sikidy* has not done the proper honour to *Andriamanitra* (putting a slave in His rubric) and consequently cannot be expected to tell you the truth in His name. The saying of the diviners that only 8 of the 16 figures agree with, or are applicable to, God ('*mety ho amin' Andriamanitra*') has been curiously misunderstood (for instance, by Mr. Ellis in his *History of Madagascar*, vol. I., p. 443) as meaning, that it never happened that any other figure got into the rubric *Andriamanitra*.

When this point is successfully overcome, the next business is to choose one of the four first rubrics (*Tale—Vohitra*) to represent the question, or, rather, the person or thing it refers to. As *Tale* is to represent everything that cannot be put under the headings 'property,' 'relations,' or 'village,' the choice cannot be very puzzling; and I suppose the *mpiti-kidy*, as a rule, settles this question in his own mind before entering upon his work; but he is not obliged to settle it before coming to the point in the operation at which we have now arrived. This being settled, the proceedings branch out into the following parts:—A. The *Sikidy* of Identical Figures; B. The *Sikidy* of Different (Unique) Figures; and C. The *Sikidy* of Combined Figures.

A.—*The Sikidy of Identical Figures* ('*Sikidy mitovy tsangana*'). Having settled what rubric is to represent the question, the next thing is to examine which of the 16 figures has got into the rubric representing it. This being found, we go on examining all the other figures except the remaining three available for representing the question (for these have nothing to do with the answer), that is to say, those on the right side, those on the left, and those on the two corners to the left (cf. what has been said about the manner of reading them).

If we, thus examining them, find that any of them is like the one representing the question, this may or may not settle the question, or, in other words, give us the answer. This depends on the nature of (name of) the rubric in which it is found. If I expect a ship and am going to enquire about its coming by means of the *sikidy*, the rubric *Harena* (property) is of course to represent it. If in this rubric I find, for instance, the figure *Jamà* (⋮⋮), and on further examination find the same figure in the rubric *Andro*, this gives me no answer, as there is no natural connection between the two conceptions. If, on the contrary, I find the same figure in the rubric marked *Lalana*, then of course I know that the ship is at any rate already *on the way*. I have then got an answer to the chief question; but there may still be good reason for a sharp look-out, for there may be difficulties in its way. Suppose that I also find the same figure in the rubric marked *Fahavalo* (enemy), my mind will immediately be filled with gloomy apprehensions of *pirates*. Not a bit more cheerful will be my prospects, if I find the same figure under *Ra be mandriaka* (much bloodshed). But what a consolation, on the other hand, if the same figure reappears under the rubric *Nia* (food); for then I must certainly be a blockhead if I do not understand that, although the ship may have a long voyage, there is no fear of scarcity of food on board; and so on. It is easy enough to see that a man with much practice and a good deal of imagination could produce much 'information' in this manner; and I suppose that in a good many cases the *mpisikidy* were able to find an answer already in this first act of their proceedings, even if the means of finding it might seem scanty enough to ordinary mortals.

But the operations do not end here; for, quite apart from the identity of the figure representing the question with one of more of those in the other rubrics, it is of great importance to find out whether some of the *others* are mutually like one another, and in how many rubrics the same figure occurs in a *sikidy*. In this respect my native helper gives me the following rules:—

1. If *Fahasivy* and *Masina* are alike (i.e. happen to have the same figure), it means *Tsi-rongatra*, which my man explains to signify *Try mihètsika*, does not move, agitate.
2. If *Fahasivy* and *Nia* are alike, it means *Màti-rà* (two deaths), i.e. two of something must die, most likely two persons; but the evil may be averted by killing and throwing away two locusts as a *faditra*. (Cf. the old Greek story about Astyages, who thought that the prediction that Cyrus would become king was fulfilled by his being nominated king in the children's play.)
3. If *Fahatelo* and *Harena* are alike, it means *Vahàaka* (a crowd of people), i.e. that a crowd of people may be expected.
4. If *Trano* and *Mpanontany* are alike, it means *Tsindrilàsy* (pressed down by an encampment [?]), i.e. that the enemy is coming.

rules for this kind of *sikidy tokana*; but as the whole are very much in the same style as what I have already given under *Andriamanitra*, I do not think it worth while to trouble the reader with all these rules, as I do not intend to enable him to practise the *sikidy* (this secret I shall of course keep for my own use!), but only to give him an idea as to what it is.

3. *Unique Figures in Harena*; 12 of the 16 figures are given as having a special meaning when found only in this rubric.

4. *Unique Figures in Fahatelo*; only 2 (*Famà* and *Taraity*) are regarded as having a special meaning.

5. *Unique Figures in Vohitra*; includes 13 (?) of the 16 figures; nothing peculiar.

6. *Unique Figures in Trano*; 14 of the figures are regarded as having a special meaning, of which the first one (*Saka*) is considered an excellent remedy against sterility, if the beans of the figure ( ' ' ) are mixed with milk, which is then to be put into 14 pumpkin-shell fragments and given to 14 children, who are to put some rice into a pot, from which the sterile woman eats it. Many of the rules in this kind of *sikidy* have a reference to sterility, sickness or death.

7. *Unique Figures in Lalana*; only 4 of the figures have any special meaning; nothing peculiar about the rules.

8. *Unique Figures in Mpanontany*; 11 of the figures have a special meaning.

9. *Unique Figures in Asorotany*; 4 figures with special meanings.

10. *Unique Figures in Nia*; only one figure (*Alasmora*) with a special meaning; it is called *Manjakaména* ('red king'). If the *sikidy* in question refers to the king, it is considered a good omen; but if to a sick man, it is bad and means *Ra mandriaka* ('blood in streams.')

11. *Unique Figures in Masina*; 3 figures with a special meaning, of which the first one refers to money, the other two to diseases.

12. *Unique Figures in Fahasivy*; 4 figures have a special meaning, but nothing particular otherwise.

I have given the special rules for this kind of *sikidy* only so far as regards the first one ('God'), just to show the general style and bearing of them. If I had done the same as regards all these 12 classes, it would have required too much space. Suffice it to say, that they either simply suggest an answer to a question, or (more frequently) at the same time also give a remedy against the evil intimated by the answer.

Before leaving this section some words should be added upon two other kinds of *sikidy* which are closely connected with the preceding 12 clauses, and are by the natives called respectively, *Sikidy Mifamàly* (i.e. '*sikidy* mutually corresponding with one another, and *Sikidy Fànahàna*, which my native helper explains to mean *fanatitra hasolony* ('a sacrifice as substitute for a person'); but these must be reserved for the concluding paper.

L. DAHLE.

(To be Concluded in our next Number.)

\* On account of the demands upon our space, a description of 'The *Sikidy* of Combined Figures' (*Lofn-sikidy*), which Mr. Dahle had supplied, must also be left to be given with the concluding paper on 'Miscellaneous *Sikidy*' and '*Vintana*,' which he has kindly promised for the next number of the ANNUAL.—EDS.

## NOTES ON THE BETSILEO DIALECT

(AS SPOKEN IN THE ARINDRANO DISTRICT).

ALTHOUGH it is generally understood that the language spoken throughout the island of Madagascar is essentially one, yet the dialects of the several tribes, and even of different clans, vary considerably. People from adjacent provinces have often great difficulty in understanding one another; so great is the difference between the dialects of Imèrina and South Betsileo, that a Hova hearing the latter for the first time can only catch the general drift of the speaker's remarks, and probably will fail to do even this. The Betsileo are excited and speak rapidly. The Hova dialect, being the common language and taught in the schools, is gradually making its way in the provinces where there are Hova garrisons and traders; but hitherto, so far as influencing the common speech of the people is concerned, its effect is the smallest.

I have been asked to contribute a paper to the ANNUAL on the Betsileo dialect as distinct from that spoken by the Hova; but as the dialects spoken in the northern districts differ somewhat from those of the south, these notes will have reference only to that portion of the province of which Bôhimandrôso forms the centre. Sândra, Lâlângina and Mânandriana have their peculiarities, but my acquaintance with these is only small. It must be understood that it is the dialect of that portion of the Betsileo province known as Arindrano that I now propose to compare with the language of Imerina, and not that of the Betsileo as a whole.

The difference between the two dialects is seen in the (1) Pronunciation; (2) Use of Different Words; (3) Peculiar Uses of Words; and (4) Construction of Sentences. Add to these a peculiar Intonation, and little more remains to be said.

—PRONUNCIATION. 1. *M* and *n* before the consonants *b*, *p*, *d*, *t*, & in Hova words are almost invariably dropped; e.g. :—

imba (H)	<i>Maba</i> (B)	Crocodile.	Manda (H)	<i>Mada</i> (B)	A wall.
panompo	<i>Panopo</i>	Servant.	Mainty	<i>Maity</i>	Black.
inkato	<i>Makato</i>	Obey.			

When not followed by the above-mentioned consonants, the *n* is commonly pronounced as *ng* in ring, hang, etc.; e.g. :—

manetsa (H)	<i>Mangetsa</i> (B)	To transpire.	Manisa (H)	<i>Mangisa</i> (B)	To count.
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The *z* in the middle of Hova words is often dropped by the Betsileo; e.g. :—

izy (H)	<i>I-y</i> (B)	He, she, it, they.	Aiza (H)	<i>Aia</i> (B)	Where?
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The final *y* in Hova words is almost always changed into *e*, as the Betsileo have a great objection to the *i* sound. The final *a* may be said to follow the same rule, though with many exceptions; e.g. :—

izy (H)	<i>Onge</i> (B)	River.	Koka (H)	<i>Koke</i> (B)	Shout, etc.
malaly	<i>Omale</i>	Yesterday.	Ketraka	<i>Ketrake</i>	Faint, etc.

The *r* in the middle of a word is also occasionally changed into *e*; e.g. :—

ikitra (H)	<i>Rehetse</i> (B)	Just, right, etc.	Hevitra (H)	<i>Havitse</i> (B)	Thought, etc.
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The *r* in the ending *tra* in the Hova dialect is invariably changed into the Betsileo; e.g. :—

manatra (H)	<i>Mengatsse</i> (B)	Ashamed.	Fanjaitra (H)	<i>Fanjaisse</i> (B)	Needle.
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6. The final syllable *na* in the Hova words is altogether dropped by the Betsileo; e.g. :—

Tànan (H)	Tānga (B)	Hand.	Varahina (H)	Varake (B)	Brass.
Saho	Saho	Frog.			

In the districts around Fianàrantsoà, however, the *na* is retained but is sounded very lightly.

7. In a large number of Betsileo words, a letter is changed or added; or one or more syllables are added; or a change of form, and something approaching reduplication, takes place. But it would be difficult to classify all these changes, as no more than two or three words follow the same rule. The following words illustrate the most common of them :—

No (H)	Ro (B)	Particle.	Omby (H)	Aombe or Ang- ombe (B)	Ox.
Ary	Ara	And.			Ten.
Tsy	Tsa	Not.	Folo	Faolo	Foot.
Ataovy	Ataovo	Do or make.	Tongotra	Tomboke	That or thus.
Matokia	Matokisa	Trust.	Izao	Izizao	A rush.
Sahy	Saky	Bold.	Zozoro	Zorozoro	Salvation.
Tapitra	Tampitse	Finished.	Famonjena	Famonjea	

8. Some of the demonstrative pronouns and adverbs of place may serve as further illustrations of these changes :—

Io (H)	Ioio (B)	This.	Ato (H)	Atato (B)	Here.
Ity	Itoy or Itoe	That.	Eo	Eoeo or Eoeo	There.
Itsy	Ititoheke	do.	Ao	Aceo or Aoheo	do.
Ireto	Iretohè	These.	Etsy	Etsetsy	do.
Ireo	Ieohè	do.	Atsy	Atsatsy	do.
Ireny	Ireo	do.	Eroa	Eroahè	do.
Ety	Etoy or Etoe	Here.	Aroa	Aroahè	do.
Aty	Atoy or Atoe	do.	Ary	Arihè	do.
Eto	Eteto	do.			

II. --USE OF DIFFERENT WORDS. There are some two or three hundred words in constant use among the Betsileo which are probably absolutely unknown in Imerina, besides a large number of unfamiliar or obsolete Hova words; while, on the other hand, very many of those most familiar to the Hova are never heard among the Betsileo. To give a complete list of such words, however, is beyond the scope of these "Notes;" a few examples will suffice; e.g. :—

Rihana (H)	Vatse (B)	Upper floor.	Tsia* (H)	E-hè or A-à (B)	No.
Tanety	Tamboho	A plain.	Rehetra	Aby or Abe	All.
Vavahady	Lozoko	Gate.	Tato ho ato	Oratronge	Lately.
Mangahazo	Kajaha	Manioc.	Any naraina	Saihandro	This morning.
Raha	Lcha	If.	Anio	Androange	To-day (future).
Angamba	Mainga	Perhaps.	Rahampitso	Ange mangam- pinto	To-morrow morning.
Zavatra	Raha	Things.	maraina		
Lainga	Vande	A lie.	Rahampitso	Ange handro	To-morrow.
Indry*	E-è	Here it is.			

Examples of the use of the above :—

(a) Nahita azy tato ho ato aho (H). (I saw him lately.) *Hitako oratronge i-y* (B). (b) Lasa izy andro any (H). (He went off this morning.) *Roso taty saihandro i-y* (B). (c) Raha tsy avy anio izy, angamba ho tonga izy rahampitso (H). (If he does not come to day, perhaps he will come to-morrow.) *Lcha tsa avy androange i-y, maingu dia ho avy ange handro* (B). (d) Lasan' ny fahavalo ny vehivavy rehetra (H). (The enemy took away all the women). *Tongan' ny fahavalo ny apela abe* (B). (e) Osa Rabe, fa Ranaivo no sahisahy (H). (Rabe is a coward, but Ranaivo is brave). *Osa Rabe, fa Ranaivo ro mahasaky raha* (B).

\* Note the accents.

PECULIAR USES OF WORDS, CASES, AND TENSES. The Betsileo of the personal pronouns differently from the Hova; thus:—ho' (I) invariably becomes *aho*; e.g.:—Hoy izaho (H); *Hoe aho* d.

accusative case of the 1st person plural, *hangay*, is always used the plural nominative, 'izahay.' Also the accusative case of the singular and plural, viz. *hangao* and *hangareo*, are always used 'y' and 'hianareo.' Note that the *a* at the beginning of Hova words pirated by the Betsileo, hence the *h* in above examples. It may be, that *hangao* and *hangareo* were formerly 'hianao' and 'hiana' that the *i* is now dropped.

are the Hova suffix pronoun *-ny* is joined to the preposition *amy*, to use the personal pronoun *azy* as well, thus: Lazao aminy (H); *amin' azy* (B). Mifanantera aminy (H); *Mifanantera amin' azy*

preposition *any*, used before proper nouns by the Hova, is also the accusative case of the personal pronoun (3rd pers.); e.g.:—nambolenay azy (H); *Omale no nambolengay ang' azy* (B).

Betsileo have a peculiar way of combining the present and past and also the future and past tenses, in some expressions, the following most common:—

(H)	<i>Mialà teto</i> (B).	Hesorina hiala hianao	<i>Halà teto hangao.</i>
aho	<i>Horoso teto aho.</i>	Hiainga ho any izy	<i>Hienga tange i-y.</i>
to izahay	<i>Ho afake teto hangay.</i>		

MONTH-NAMES. The following are the names of the Betsileo months, like with those of the Hova months, but as the former depend more on the rice-planting, harvest, and the flowering of certain grasses and on the phases of the moon, the comparison is only approximately

(H)	Vatratra (B)	Adijady (H)	Volakiahia (B)
	Asotrizonjô	Adalo	Sakamasao
	Hatsiha	Alohotsy	Sakave
	Valasira	Alahamady	Volambita
	Faosa	Adaoro	Asaramatsy
	Volamaka	Adizaoza	Asaramangitse

TRANSLATION OF SCRIPTURE. The following translation of the 1st by side with the Hova Revised version, will give the reader a idea of the extent of difference between the two dialects.

Hova.	Betsileo.
tra ny olona	1. Sambatse ny olo
mandeha eo amy ny fisainan' ny	Izay tsa mandeha eo amy ny fisaingan' ny
mijanona eo amy ny lalan' ny	ratsy fangahe,
petraka eo amy ny fipetrahan' ny	Ara tsa mienge eo amy ny lalan' ny mpan-
lalany Jehovah no sitrany;	gota,
iny no saintsaininy andro aman-	Ara tsa mitoetse eo am-pitoeran' ny mpan-
ny hazo nambolena eo amoron'	garatsy.
na izy,	2. Fa.....* ny didin' Angahare ro teane;
na amy ny fotoany,	Ara ny didine ro saisaingine andro amang-
koa tsy mba malazo;	ale.
ny rehetra atony lavorary.	3. Dia tahake ny hazo nambole teo amo-
	rong-drano velo i-y,
	Izay mamoa amy ny taonge,
	Ara ny ravene koa tsa mba malazo;
	Ara ataone efa soa abe ny asange.

are put in to represent a peculiar way the Betsileo have of drawing out certain

## Hova.

4. Fa tsy mba toy izany ny ratsy fanahy,  
Fa toy ny akofa aelin' ny rivotra izy.  
5. Ary amin' izany dia tsy hahajanona eo amy ny fitsarana ny ratsy fanahy,  
Na ny mpanota eo amy ny fiangonan' ny marina.  
6. Fa fantatry Jehovah ny lalan' ny marina,  
Fa ny lalan' ny ratsy fanahy ho very.

## Betsileo.

4. Fe...ro... tsy mba to' izay...ny ratsy fangahe, (i-y.  
Efa.....tahake ny ara-bare aelen-drivotse  
5. Ara amin' izay dia tsy hahatoetse eo amy ny fitsarà ny ratsy fangahe,  
Na ny mpangota eo am-pivorian' ny mare.  
6. Fa.....fatats' Andrianangahare ny lalan' ny mare,  
Fa.....ny lalan' ny ratsy fangahe ho vere.

VI.—ACCENT AND INTONATION. The Betsileo intonation is somewhat broader and heavier than that of the Hova, and they have a peculiar way of drawling out some words, especially the conjunctions *fa=fea (=fe)* and *ka*, to which they sometimes attach a kind of particle; e.g. *fe....ro*; see v. 4 in the above Psalm. Sometimes, however, when they get excited in disputes or at a *kabary*, they speak with great rapidity (still, however, with an occasional drawl); so that it is almost impossible for any one whose ear is unaccustomed to their speech to grasp a third of what they say. They are also very demonstrative when speaking, often dancing and leaping about in a frantic manner; and their actions and grimaces at a *kabary*, for instance, are often very amusing.

Like the Hova they are very fond of proverbs, illustrations, and fables; and, to the best of my knowledge, are far more clever than the Hova in extemporizing a parable or illustration. Many of our Betsileo preachers have all the elements of good speakers, and with a little polish would certainly make creditable orators. Those who have had any education, however, hardly ever preach in their own dialect, but in more or less perfect Hova. And as that dialect alone is written, we think it wise to encourage the Betsileo to learn and speak it as much as possible.

T. ROWLANDS.

—o—o—o—

### SOME BETSIMISARAKA SUPERSTITIONS.

THOUGH the Betsimisarakas, in common with all heathen nations, have an intense appreciation of the power for evil possessed by the spirits in which they believe, they yet seem superior to many in that they do recognise One Being, supreme over all. They have no fiction of destiny or fate, to which even the king of the gods must bow, for they do not say that a man's life is governed by a good or evil fate, but that he is '*tsara* (good) *Zanahary*,' or '*ratsy* (bad) *Zanahary*.' This *Zanahary* they represent as a Supreme Being, Creator of all things, immaterial, without visible form, dwelling above, and being everywhere. He, in all religious observances, is invoked first of all. Though they use both '*tsara Zanahary*' and '*ratsy Zanahary*,' as mentioned above, they will not allow that evil comes from Him; the former expression

is often used in the sense of a 'providence' or 'piece of good fortune.' Any Betsimisaraka having a natural defect or peculiarity will not say simply, "I was born so," but, "so Zanahary made me." I remember also the case of a village idiot who did odd jobs for the inhabitants, such as pounding rice or cutting firewood. When the people tried to take advantage of his weakness of intellect and cheat him of his wages, he would say, "You think you can cheat me because I am a fool, but Zanahary sees."

The lesser divinities, '*Zanahary kely*,' are also revered, as well as the dead ancestors; of the latter each family has its own; and the more remote they are, the more they seem to be revered; these are all invoked in their religious ceremonies. Owing to some connection with their ancestors, certain animals are revered by various tribes; e.g. one family claims to be descended from a woman who was born of a cow, and therefore does not eat beef; another shews the greatest respect for the *bàbakòto* (*Lichanotus brevicaudatus*), the largest species of lemur, because one was said to have saved an ancestor from a severe fall; the dead body of this lemur they bury with the honours paid to a human being, and any person having shot one would find it hard to get a night's lodging in one of the villages of the tribe.

The *angatra*, which is much dreaded, seems to correspond exactly to the vulgar 'ghost' in England. It is, they say, the spirit of the dead person and dwells in the air, but more particularly haunts the place where the body lies, sitting, some say, at the head of the corpse. No Betsimisaraka would approach a grave after dusk, and they believe that diseases or misfortunes befall those who offend the *angatra* in any way, or even take up their abode too near them; loud talking or laughing, it is said, is peculiarly objectionable to some of these ghosts. They can give no reason for their dread, but they believe that the design of the *angatra* is to cause fear. In some cases, they say, it is heard to speak even in broad daylight, without any appearance accompanying the voice.

On one occasion in the country one of my boatmen was sleeping alone in a small outbuilding in use as a kitchen; about midnight we were aroused by terrible groans and exclamations, and on our going to him, we found him sitting up trembling, and he declared to us that he had not been asleep, but that soon after he lay down something came and grasped him by the throat, preventing him for some time from calling out. He assured us that there was a ghost there, and that he must come and share our house, which he did. One can only be astonished that such ghostly visitations are not more common, considering that a native usually retires to rest immediately after a very hearty meal.

Besides the spirits already mentioned, almost every tree or stone or piece of ground seems to have its demon or spirit, generally exerting its power for evil on offence given, but sometimes for good. We find a result of the latter belief in the custom of making a thank-offering (*manao tsika-fàra*) on a particular spot, if the ground had been more than ordinarily productive; or if it were the site of a house, after inhabiting which the owner had been remarkably fortunate. In this case, after the usual invocations, he invokes this 'holy ground,' that is, I suppose, the spirit

under whose protection it is, though as a fact, the place or thing itself is always spoken of. Passing one day in a canoe along a very narrow stream quite overhung with trees, I noticed that in one particularly awkward spot the branches were covered with strips of cloth knotted on to them. On asking the rowers why this particular tree was thus decorated, I was told that "it is mighty, it killed a *Vasôha*." The truth soon appeared on enquiry: a trader passing and finding the thick overhanging branches most inconvenient, had them hacked down, and it so happened that shortly afterwards the said trader died. His illness and death were put down to the vengeance of the offended spirit of this tree, and hence the respect shewn to it, and the desire to propitiate it. (I have not discovered whether the spirit of the tree is supposed to be a male or a female; it would be curious to see if we should get at anything like the ancient Nymph of the tree.) It may be noticed, in passing, that attaching a strip of cloth is the recognised mode of propitiation or, at any rate, of shewing respect; I have seen a stone of peculiar sanctity swathed in a comparatively large piece, but such liberality is the exception.

Another curious custom in this same narrow stream is that of knotting the long flags on the margin; this I was assured was done, as we should say, 'for luck.' On another occasion our boat passed a lovely spot, when the end of a range of hills met the water in a steep slope clothed with fine trees and dense creepers. This was the more remarkable, as the surrounding heights were quite bare, and it really looked at first sight as if the natives had been loath to spoil the effect of this beautiful bit of scenery; but, on asking how it was that this had escaped being cleared for rice-planting, I was at once told that the attempt had been made, but that there was 'something' there. "What do you mean by something?" I asked, "snakes, or wasps, or what?" "No! No!" was the answer, "something uncanny; and any one who has attempted to clear it has very shortly come to a bad end." It is quite clear that the guardian spirit of that place had a better appreciation of natural beauty than the natives.

The thank-offering (*manao tsikafara*) mentioned above is, as we have seen, intimately connected with this belief in local spirits, and it will serve as a type of other religious ceremonies. It is the usual form of thank-offering for any piece of good fortune, recovery from illness, preservation from danger, etc. It is generally held at one of the memorial stones or posts which are found scattered about the country, and most frequently in the centre of the villages. The main part of the ceremony is killing an ox. This is taken to the appointed place, together with a supply of native rum. The ox having been slaughtered, some portion is set apart with a little rum and white rice, and these are placed upon a sort of table made of short sticks bound together with creepers. Then the spirits are invoked,—first *Zanahary Ichibe*, then the lesser divinities, male and female, white and red, then a long string of the ancestors of all present. It is a deadly insult to omit to invite any one member of a family, and to pass over the name of one of the ancestors is also a serious offence. The invocation ended, the meat is divided amid singing, dancing, and rum-drinking; the close of the ceremony is

usually general intoxication. In the offering of the first-fruits, while the chief ceremonies are virtually the same, though more elaborated and generally held in the house, it is the custom in some districts to allow the children to scramble for the meat and rice which had been set apart for the spirits.

I can get no explanation of the custom of calling upon the gods, white and red; some say it has no particular meaning, and so we may suppose only arises, like the altar "to the unknown god," from a fear lest some god should be omitted.

The objects which are *Fady*, or tabooed, seem to be much more numerous than in Imerina, and some are very curious.

Some of our newly-entered school-children would eat nothing that had been carried in a hat; on one occasion many refused to partake of the *laoka* (relish, on the coast always fish), because the boy who had been sent to buy the salt for it had brought it back in his cap. On another occasion, at a school treat, when the children were ravenously hungry through long waiting, and the meat was just being served out, one big fellow got up suddenly and, with tears in his eyes, walked off and threw himself down under a bush; poor fellow! to eat any part of an ox's head was *fady* in his family, and he had just caught sight of a piece of jaw amongst the meat. Many again will not touch an eel (this is especially the case with the more southern tribes); and while you may pass through one village swarming with pigs, in the next, pork is *fady*, and not a pig is to be seen. These ideas are frequently very inconvenient, as in the case of a servant whose *fady* was milk, for she was very unwilling even to carry a vessel containing it, for fear any drop should be spilled upon her.

Coming to the Folk-lore of the Betsimisaraka, it is curious to find the main features of the stories which come to us from other countries represented also in these; in the few instances I propose to give, everyone will probably recognise some similarity to stories they have known from childhood, and yet in every case these tales have been told me by the natives.

First then we have Mermaids, called *Zdsavavy an-dràno*, which certainly have a strong family likeness to those of sailor lore; they are said to be seen sitting upon rocks or by the shore (not generally the sea-shore, by the way), combing their hair, which is very long and beautiful. There are said to be some dwelling under the bluff at Mâhanôro; and on rare occasions others are said to have been caught in the nets of fishermen in other waters. The story goes that one fisherman out alone caught one in his net, and, being captivated by her beauty, proposed that she should become his wife; she consented, but warned him that he must never reproach her with her origin, or she would be compelled to leave him; to this he agreed, and the couple lived happily together for some time, three children being born to them. But one day, the man coming in at mid-day hungry and tired and, says the story, rather drunk, found his food not ready; this led to words, and finally the man, losing his temper, said, "Who are you to talk to me in that way? you are nothing but a thing I took out of the water." The wife made no answer, but on returning in the evening again, the fisherman found her gone, and with her his two younger children. The rest was told him by his eldest boy. As soon

as his father had left the house after his meal, his mother took him and the two other children down to the water, and holding one child in each hand (and the baby, I suppose, on her back in the usual fashion, but history saith not), she at once plunged in and dived. The boy soon had enough of it, and his mother noticing that he was being suffocated, took him ashore again and said, "You are no good ; go back to your father ! You are no son of mine !" Then leaving him on the shore, she again dived with her two children and was never seen again.

It appears, however, that these dwellers in the water are not always females. In a large piece of water on the high(water)-way south of Mahanoro, between Ambódihárana and Andránotsára, is said to be a colony of people possessing large herds of cattle. The story is that a father and two sons lived on the shore of this lake. One day a serious quarrel occurred about driving up the cattle into their pen, and the father declared that he would have nothing more to do with them if they would not obey him. The two young men apparently took him at his word, went down to the water, and were last seen paddling out into the lake in their canoe. Some months after they returned home and asked their father if he was ready to give way ; on his sternly refusing to do anything of the sort, they went off again in their canoe and returned no more ; and, says the story, there they are, doing very well under the water, with large herds of oxen. The story further says that after high winds, when the water has been much agitated, leaves which have been used as spoons and dishes, and the other ordinary refuse of a Betsimisaraka house, are washed up. No account is given of how these two young men became a colony ; one is sorry to miss the probably interesting story of their watery wooing. Whatever we may think of the story, the fact remains, that the natives have a great dread of this piece of water, and are always much relieved when they have got safely over it. This is more particularly true of the people in the immediate neighbourhood, and if you ask them why they are especially afraid of this lake, they say, "Because there is 'something' in it," which is perhaps more than one can say of the story.

We next come to the forest, and from there we get endless stories of the '*Kalanoro*,' a sort of wild-man-of-the-woods, represented as very short of stature, covered with hair, with flowing beard, in the case of the male, and with an amiable weakness for the warmth of a fire. An eye-witness relates that once, when spending a night in the heart of the forest, he lay awake watching the fire, which had died down to red embers, when suddenly he became aware of a figure answering to the above description warming himself at the fire, and apparently enjoying it immensely. According to his story, he put a summary end to the gentleman's enjoyment by stealing down his hand, grasping a stick, and sending a shower of red-hot embers on to his unclothed visitor, who immediately, and most naturally, fled with a shriek. Another tells how, on a similar occasion, the male appeared first, and after inspecting the premises and finding, as well as a fire, some rice left in the pot, summoned his better half ; the pair squatted in front of the fire and--touching picture of conjugal affection--proceeded to feed one another !

One must confess that the creature described looks suspiciously like one of the larger sorts of lemur; but in a village near Mahanoro, and on the verge of the forest, the inhabitants say that very frequently these wild people come foraging in their houses for remnants of food, and may be heard calling to one another in the street.

As might naturally be expected in a country covered in every direction with rivers and lagoons, all alike swarming with crocodiles, there are many stories of the marvellous escapes or dreadful deaths of people who have met with them; but in addition to these, there are some curious ideas current about these brutes. The *Mpamosavy* (witches) are always represented as being on most friendly terms with the crocodiles; it really seems to be a well-authenticated fact that these women can with impunity go down to the waterside after dark. They are said frequently on these occasions to feed their strange pets with rice, and sometimes to entice them out of the water and take them for a stroll through the village at midnight; they are also accused of trying to persuade people to bathe near the lair of their pet crocodile, with a view to furnishing him with a satisfactory meal. It is also said that if a crocodile has attacked any person and torn off a limb or portion of flesh, and the wound proves fatal, the crocodile will sooner or later find its way to the grave of its victim. Many, I have been told, have been surprised by daylight while doing so, and, being bad travellers on dry land, have been easily overtaken by the inhabitants and slaughtered. It is quite certain that it is not so very uncommon to hear of a crocodile being found on dry land, far away from any water, but its motive in placing itself so fatally at a disadvantage must of course be mere matter of conjecture.

The above particulars have been collected merely in the ordinary course of work and travelling, and will serve some purpose if any one is thereby induced to undertake a more thorough investigation of what can hardly fail to be an interesting subject.

G. HERBERT SMITH.

## A NEW MALAGASY GRAMMAR.

**A**MONG the first fruits of peace between France and Madagascar is a welcome addition to the small, but steadily increasing, number of works helpful to those interested in the study of the Malagasy language, viz. a Grammar in French, by the Rev. Père Causseque, S.J.,\* recently published at the Press of the French Mission. This is a book of 198 pp. 12mo, that is, nearly double the size of Père Webber's Grammar (1855), and about half as large as that of Père Ailloud (1872). This Grammar is clear and concise in arrangement, and is well illustrated by a good selection of genuine Malagasy

\* *Grammaire Malgache par Le R. P. Pierre Causseque, S.J., Missionnaire de Madagascar. Antananarivo. Imprimerie Catholique, 1886.*



phrases. The most serious objection to certain portions is, that they seem to be formed too much on the style of grammars of the Latin and of modern European languages, and we get what appear such needless paradigms as those contained on pp. 68–81, etc., and we hear too much of "conditional" and "subjunctive" moods, as if we had under our consideration a language in which separate forms for these moods actually existed. These, together with other apparently needless matter (e.g. § 1, *La grammaire malgache enseigne à parler et à écrire correctement en malgache*), seem to have been inserted more for the use of Malagasy students than for foreigners; and as we meet them in our perusal of the book, it is due to the author to bear in mind his own explanation contained in the preface ("*Dans la réduction de cette grammaire, j'ai suivi le plan de la grammaire générale, et cela pour deux raisons: premièrement, par cette méthode, nos élèves malgache seront mieux initiés à l'étude de la langue française; en second lieu, il m'a semblé que mes compatriotes seraient bien aises de trouver les matières traitées dans le même ordre que dans leur propre langue. On pourrait ajouter que la clarté ne perd rien à cet arrangement*"). On comparison with the Grammar of Père Ailloud published 14 years ago, the present work will be seen to possess far greater clearness of arrangement and more conciseness of statement, and it also greatly excels its predecessor in its selection of examples. To one belonging to what Père Causseque calls "the Anglo-Malagasy school," this new Grammar has peculiar interest, in that it shows a much greater disposition to conform to general usage in the mode of writing Malagasy than has been shown by anything hitherto written by a French author. Especially noticeable is the clear and decided position Père Causseque takes as to the desirability of joining the fragments of the personal pronouns with the words they define. For years it has seemed an incomprehensible thing to many here that French writers could still be content to follow the earlier Protestant missionaries (as shown, for instance, in the New Testament of 1830, and in the Bible of 1835), and write *mpianatr'o*, *mpiana' ny*, *fo ko*, *amy ko*, etc., instead of *mpianatro*, *mpianany*, *foko*, *amiko*, etc. Let us hope that at last all authorities will agree to follow the usage that has prevailed from 1862 in "the Anglo-Malagasy school," as the mode most in harmony with that followed in other languages in which these abbreviated pronominal suffixes exist, and in favour of which Père Causseque now so clearly and cogently argues in this new Grammar.

To the Grammar itself Père Causseque adds an Appendix of 47 pp., in which he states with some fulness his reasons for proposing several changes in the mode of writing certain classes of phrases. This Appendix can be obtained separately for sixpence, and is worthy of careful study by every one interested in Malagasy orthography. There are four points in it that demand special notice.

(1) The first of these is the Use of the Apostrophe. Père Causseque says very justly that we of "the Anglo-Malagasy school" do not seem to have attained to any consistent and well grounded principles as to the use of this sign. Confessedly much uncertainty and perplexity are felt by those who have the responsibility of correcting the press. Indeed one of our best linguists has asserted that where the use of the hyphen begins reason ends (see ANNUAL VI., p. 63, etc.), and possibly he would be quite willing to include the apostrophe also in his doctrine of despair. Père Causseque proposes to remedy this uncertainty by the introduction of one simple and thorough-going principle, viz., that the apostrophe be used only and always to mark an elision, either of a single vowel or of a syllable, whether with or without a euphonic change of consonant. He would thus write *sàtrok' andriana*, *sàtro' bbrozàny*, *hèvi' ténny*, *fàntatr' izy miànaka*, *làlan' ny blona*, *anatr'i-*

*han' ny vahtaka*, etc. Though some of these phrases thus written would look strange for a time to those who have been accustomed to our present way of writing them, one cannot fail to see at a glance that in that most troublesome task, the teaching of young Malagasy to write their own language with correctness, the labour would be greatly lessened were we to adopt this one simple rule, which would cover thousands of examples. There would of course still remain the uncertainty as to whether two words had become so intimately united as to have become one, and thus no longer requiring any break to suggest their origin; for instance, are we to write *zava' pàana* or *zavapàana*, *hèvi' ténny* or *hèviténny*, *òlom' pòtsin' andriana* or *òlompòtsin' andriana*? But usage would gradually settle all outstanding questions of this kind.

(2) The second principle I refer to is, that the Hyphen should only be used when uncontracted words are sufficiently united in meaning to require some sign of their connection, but cannot be considered to have so far coalesced as to form single words. Thus Père Causseque would write *lari-teny*, *laha-ténny*, *te-ho sambatra*, etc. This again would be an easily understood rule, and would tend greatly to diminish the number of hyphens in use. We of "the Anglo-Malagasy school" have been accustomed to use the hyphen not only in such cases as the above, but also when a syllable has been thrown away, as in *zava-pàana*, *misàmbo-balàla*, *òlo-màrina*, and also when, through the elision of a vowel, two consonants have come together, as in *fitiàvan-karèna*, *fisotrànan-tsàka*.

(3) Another important change advocated by Père Causseque is the Omission of the Apostrophe in such phrases as *trànon' ny òlona*, *vòlan' ny mpivàra-tra*. His strongest argument in favour of this change is, that it enables us to see at a glance whether a word belongs to what he well names "*mots décroissants*," or to "*mots croissants*," that is to say, between nouns ending in a weak terminal (*ka*, *tra*, *na*), and those that possess a firm terminal. This distinction is clearly marked in the language, and it might be a gain to use a simple *n* with no apostrophe with words possessing the firm endings, whenever they are followed by a possessive case, etc. (or, as French Grammarians would say, by their "*complément indirect*," see § 11). Père Causseque argues that the apostrophe is neither necessary, useful, nor free from inconvenience (see Appendix, p. 19-22). As specimens of the various classes of words affected by the adoption of this rule, Père Causseque gives the following:—

a	{ <i>fiténin ny òlona.</i>	c	{ <i>trànon io òlona io.</i>
	{ <i>hitàn ny rény tsàra.</i>		{ <i>hitàn i Fàra.</i>
b	{ <i>trànon òlona.</i>	d	{ <i>tànin bàry.</i>
	{ <i>hitàn òlona.</i>		{ <i>tànin ketsa.</i>

That some sign of connection between a "*mot croissant*" and its "*complément indirect*" is required, Père Causseque fully concedes, and refers to Père Webber's statement to the same effect: "*Ce fait si important n'a pas échappé au génie du P. Webber. Dès l'année 1855, il le constate dans sa grammaire, p. 59, en ces termes: 'Les hovas les plus intelligents, dit-il, doublent toujours le ny et écrivent 'ny tranony ny vahiny, ny nataony ny Mpanjaka, ny tompony ny lakana.'*" Père Causseque was not probably aware that the above statement was taken from the Grammar of Mr. Edward Baker (p. 26), formerly Missionary Printer here. For some years we printed a double *ny*, as in the above examples; but in 1873 I proposed to substitute an apostrophe for the *y* of the first *ny*, and to write thus: *tranon' ny olona* (see my Grammar, p. 44 of the first edition). This plan was adopted tentatively by the Bible Revision Committee, and in a remarkably short time was received with approbation both by natives and by foreigners of "the Anglo-

Malagasy school." This swept away a vast number of ambiguities, and was a fair representation of the actual pronunciation. Of course on Père Causseque's principle that the apostrophe marks an elision, we are bound either to show that the *n'* represents a *ny*, or to acknowledge ourselves convicted of an inconsistency. I have long inclined to the belief that this *n* (with the similar *n* or *m* found in such compounds as *tānin-kétsa*, *tānim-bary*) is a fragment of the pronominal suffix *ny*; but I cannot point to any decisive proof that this is so; and as the printing of *n'* involves a theory, and the simple *n* equally well represents the sound, and would enable us to see at a glance whether the word before us was one that had suffered the loss of a final vowel ("mot décroissant"), or one that, having a firm final syllable, had received the addition of *n* to indicate that it was followed by a possessive, agent, etc., I can see that Père Causseque's suggestion has some clear advantages, and commend it to the careful consideration of those who are interested in Malagasy orthography. Should we on the whole gain or lose by adopting it? At present a final *n'* suggests a possessive, etc., but decides nothing as to the character of the word; but if we follow Père Causseque's rule, the *n'* will suggest this, with the additional fact that we have before us a "mot décroissant," whilst *n* will suggest the possessive, etc., and at the same time remind us that the word to which it has been appended is a "mot croissant."

(4) The last point to be noticed here is the printing of the Prefix *i* before the names of persons and places which have not already received one of the other prefixes (*An*, *Ra*, *Andrian*, *Raini*). Père Causseque's remarks and illustrations bearing on this point may be seen in §38, 330, 331 of the Grammar, and on pp. 43, 44 of the Appendix. Attention has already been called to this question, not only in brief notices in the Grammars, but also in a separate paper published a year or two since by the Rev. R. Baron, F.L.S., and reprinted in this number of the ANNUAL. I have long felt that the regular use of this prefix would tend greatly to lessen existing ambiguities. It is clearly enough retained in the pronunciation of the natives, as, for instance, in such phrases as *vādiny Adāma*, *zānaky Abrahāma*. If the natives considered *Adama* and *Abrahama* as complete names as *Andriambelo*, for example, they would as naturally say and write *vadin' Adama*, *zanak' Abrahama* as they do *vadin' Andriambelo*, etc., but to these forms they at once object. Is not the simplest explanation of their objection to be found in the fact that every proper name requires a prefix, and that to foreign words like *Adama* and *Abrahama*, the prefix *i* is the only one admissible? as no one seems disposed to say *Andrianadama* or *Rabrahama*. The only argument of any force that I have heard urged against the writing of this prefix *i* is, that it is wanting in respect; and to a certain extent this is quite true. *Iānona*, for instance, is less respectful than *Rānona*; but when we find such phrases as *Ingāhy Prime Minister*, *ivādinao*, *isakaizanao*, *iāmpokolāhy*, etc., we see that too much weight ought not to be laid upon this objection. Some of our native helpers in the Revision Committee would be disposed to accept the innovation of printing this *i*, if only the two words *Jesosy* and *Jehovah* might be made exceptions, as they feel there would be serious irreverence in writing *i Jesosy* and *i Jehovah*. But what, one might ask, is the difference between *teniny Jesosy* and *tenin' i Jesosy*? The sound is the same, and the second form appears to suggest the true analysis of the phrase. Much inconvenience arises from our not using this prefix, as Mr. Baron has abundantly shown. Some time since I received a note pointing out an ambiguity in our translation of 1 Kings xv. 33 ("*lao Tirza Basa*"). The combination of these two words suggested that *Tirza Basa* is a compound proper noun (like *Kaisaria-Filipo*, etc.). The sugges-

tion of the writer was that we should write "*tao Tirza i Basa*," which he said would at once convey the correct meaning. I hesitate to recommend the adoption of this suggestion in the new edition of the Bible soon to be printed, because it has received no fair trial in our general literature. Supposing it were fairly tried for a few years, until competent judges could form an opinion as to its usefulness and propriety, it might be hereafter introduced into editions of the Scriptures.

I have selected the four suggestions enumerated above, because they seem to me of great interest and importance, and also because I think that, as far as possible, foreigners of all parties should strive to attain uniformity in their modes of writing Malagasy. We are certainly drawing nearer to this desirable goal, and may now cherish the hope that soon there will be no "Anglo-Malagasy" or "Franco-Malagasy" school; but that in Malagasy, as in our own languages, there will be, in the main, but one standard, to which all careful writers will feel bound to conform.

WILLIAM E. COUSINS.



#### BIAZAVOLA: A MALAGASY BARD.

THE author of the following vagabond verses seems to have been one of those gifted unfortunates who sometimes straggle into the charmed domains of genius from the border-land of craziness. But Biázavòla had as much of the rogue as of the artist in his nature, and his morals were as loose as the rhythms of his ditty. He appeared in Antanànarivo during the time of the first Rànavàlona. Certainly not a shining light to enter the darkness of those much overclouded days, for he quickly became notorious by preying on the people through their superstitions. The account he gave of himself was, that he was a scion of a princely family of western Onjatsy,\* and that like most of that peculiar caste, he had the power of the evil tongue. Sàkalàva-land has always been the haunt of sorcery and things mysterious, and the Hova of Imérina were not prepared thirty years ago, as they probably would be now, to dispute the claims of an unknown prophet who had confidence enough in his professions to dare a crowded market-place to put him to the test. "Better lose the little that I require," said Biázavola, "than be followed by the Onjatsy's curse," as he boldly walked amongst the squatting traders and helped himself to whatever took his fancy. To whom were the sufferers to appeal? Did not the terrible Queen herself summon the chiefs of this stranger's clan to curse the white-men's warships when they assembled to attack her eastern ports? Biázavola, with an Arabian waist-cloth about his loins, a conical red hat upon his head, and a staff of sacred tamarind in his hand, was master of the situation.

\* Priests or diviners, chiefly among the Tanòsy, Antankàrana and Sàkalàva; see ANNUAL III., p. 31 (*Reprint*, p. 286).—EDS.

The mild-faced wanderer, for of such an aspect one conceives him to have been, into whose eyes, when thwarted, would leap the flash of a doomful imprecation, was more than a match for all the uninspired sanity of the chaffers of the mart. But alas! Biazavola could not be always great. His erratic wits would sometimes straggle home again, and then he became a common fool. On such occasions he used to stand in the busy thoroughfare and deliver what he called a 'Message from the Throne,' admonishing all and sundry in good set terms not to cheat or steal, but to pay their way like honest men and women. The Malagasy are quick to see the joke which lurks in outrageous inconsistency, and must have been prodigiously amused.

Amusement, however, soon casts out fear, and so it came about that when Biazavola began his Onjatsy operations in a market near the Royal Palace, a complaint was made to Her Majesty respecting him, and he was immediately put in chains. The fetters, it is said, were unusually heavy, and, in some way or other, one of his legs was broken, and he became a wretched cripple. Then it was that Biazavola's demon urged him into song. His misery made a bard of him. He took to himself half of a dried pumpkin-shell, attached it to a suitable handle of wood, fitted on three taut strings, composed his jigging ditty, and once more appeared in the great market-place, with a much better outfit this time than any amount of Onjatsy curses.

There was probably not much music in his rude guitar, but he had an excellent voice, and the bubbling human nature of his verse carried everything before it. He touched Imerina in its tenderest heart and became a tremendous success. No longer was it necessary for him to help himself unlawfully to the needs of life: he was helped by all who heard him. He had sung his song, he deserved his supper, and there was enough and to spare both for him and the slave-girl who was his constant companion, and of whom he sometimes used to sing:—

"I shall never forget my Tsàramièra;  
If there's broth in the pot, we shall drink together,  
And if meat be left, we shall eat together."

But there was little room for genius in the land in those days, and least of all for genius which could not hold its tongue. Biazavola contrived to offend almost as much by his repentance as he had previously done by his crimes; and it was decided to rid the city of him as a too pathetic nuisance. His chains were removed, and he and his Tsaramièra were compelled to return to the quarter whence they came.

#### IBIAZAVOLA.

<sup>1</sup>  
Ry vahoaka, ry olona !  
Tsontsa anie Biazavola :  
Nefa tsy nangalatr' olona,  
Tsy mba nihady fasanà,  
Tsy mba nanamy trano,  
Tsy mba nangalatr' omby;  
Fa matin' ny vava tsy nahy,  
Ka matin' ny vava nataony.

<sup>3</sup>  
Ry vahoaka, ry olona !  
Ny ana-drany aman-dreny  
Alatsaho any an-kibo,  
Fa tsipak' ombelaky :  
Ka mahavoa, mahafaty,  
Tsy mahavoa, mahafanina.  
Sady mananatra anareo aho  
No mandatsa ny tenako.

<sup>5</sup>  
Ry vahoaka, ry olona !  
Tsy mba nitoto vary aho ;  
Tsy mba nantsaka rano aho ;  
Tsy mba nisoron' afo aho ;  
Tsy mba nitaona zezika aho ;  
Tsy mba nikapa bazo aho ;  
Tsy mba nitaona vato aho ;  
Dadaiko o, neniko o, havako o !

2	4	6
ika, ry olona !	Ry vahoaka, ry olona !	Ry vahoaka, ry olona !
menatr' olona ;	Tsontsa anie aho e !	Izao teniko izao, ry zareo,
impofa,	Latsa anie aho e !	Ento amin' Ikalatokana :
ika nitroto ;	Resy anie aho e !	Mifona anie aho e !
o, ry zokiko o !	Very anie aho e !	Mandady anie aho e !
o, ry zandriko o !	Ory anie aho e !	Mitsotra anie aho e !
o, ry taniko o !	Ambaka anie aho e !	Mibaboka anie aho e !
o o, ry namako o !	Maty anie aho e !	Mihohoka anie aho e !
7	Dadako o, tsy tsontsa va re aho ?	
	Neniko o, tsy latsa va re aho ?	
	Zokiko o, tsy resy va re aho ?	
	Zandriko o, tsy very va re aho ?	
	Havako o, tsy ory va re aho ?	
	Taniko o, tsy menatra va re aho ?	
	Namako o, tsy ambaka va re aho ?	
	Sakaizako o, tsy maty va re aho ?	

BIAZAVOLA (TRANSLATION).

od people and countrymen ! has left Biazavola ; ie never kidnapped anyone, r on tombs made robbery, r was he a burglar, r he lifted cattle ; guilty of things unintended, on for talking too freely.	5 O good people and countrymen ! Never would pound the rice, Biaza, Never would go to well, Biaza, Never would feed the fire, Biaza, Never would fetch manure, Biaza, Never would chop up wood, Biaza, Never would carry stones, Biaza, Daddy mine O, mammy mine O, kith and kin O !
od people and countrymen ! ed am I now in sight of you ; laddy used to nurse me, never grew tired of fondling ; ly mine O, O brother mine O ! my mine O, O sister mine O ! and kin O, O home of mine O ! ldso'mine O, O mates o'mine O !	6 O good people and countrymen ! My prayer praying to the Queen, my kind folks, Take it up to Ikalatokana ; I plead and beseech Her indeed, I grovel before Her indeed, A suppliant sinner indeed, A penitent prostrate indeed, In dust and in ashes indeed.
od people and countrymen ! counsel parents give you, t find a place in your bosoms ! ke a bull 't may kick you, hit you it will kill you, t not 't will take your breath ay ; giving you advice and warning an awful example too.	7 Daddy mine O, I'm vagabond, am I not ? Mammy mine O, reproach to you, am I not ? Brother mine O, down-trodden, O am I not ? Sister mine O, I 'm castaway, am I not ? Kith and kin O, in misery, am I not ? Home of mine O, ashamed of thee, am I not ? Mates o' mine O, I 'm badly-used, am I not ? Friends o' mine O, I'm done for, O am I not ?
od people and countrymen ! it has left me, I say, ned am I now, I say, n in the mud, I say, altogether, I say, ched indeed, I say, sed and cheated, I say, : for for ever and aye.	

W. CLAYTON PICKERSGILL.

## VARIETIES.

## THE PIRATES IN MADAGASCAR.

CHARLES X. had returned to his dominions after his mad plunge into the Ukraine, and the, to him, fatal and decisive battle of Pultowa. His fortunes had become desperate, but his Prime Minister, Gortz, formed a scheme to benefit his master. The details of this scheme introduce the following passage:—

"For a long time past, pirates of all nations, and particularly from England, had formed amongst themselves an association and infested all the seas of Europe and America. Pursued everywhere and, when captured, granted no quarter, they at last retired to the coast of Madagascar. Here were these desperate men, notorious for deeds that only lacked justice to be called heroic. They sought for a prince who would be willing to receive them under his protection; but the laws of nations shut them out from all the ports of the world.

"From the time that they were sure that Charles had returned to Sweden, they hoped that this prince, with his passion for war, which it seemed necessary for him to make, and lacking both fleet and soldiers, would come to some happy arrangement with them; they therefore sent a deputy to him, who came to Europe in a Dutch vessel. He proposed to Baron Gortz to receive them at the port of Gottenburgh, where they offered to render themselves up with sixty vessels, loaded with wealth.

"The baron induced the king to agree to the proposition; and the following year two Swedish gentlemen, named Cromstrom and Mendal, were sent to complete the negotiation with these corsairs of Madagascar. Charles found afterwards some help more noble and more important in the Cardinal Albe-roni, a powerful genius, who had governed Spain so long for his own glory, and very little for the good of that country."

Translated from *Histoire de Charles xii. par Voltaire*, by

THOS. BROCKWAY.

## GEOLOGICAL JOTTINGS.

DURING a visit to Antsihànaka the year before last, I saw an extensive deposit of limestone, of a coarse crystalline texture, some reddish, some white. It occurs about a mile south of Ambàtondràzàka, and also a little further distance north of that town. No use has ever been made of it, and its true nature is unknown to the natives. Yellow jasper rock occurs in the same neighbourhood, and also a compact cherty rock almost like flint.

Quartz is very plentifully distributed throughout the district of Antsihànaka, and in some parts the hill-sides are covered with immense blocks of the pink or rose variety. On one hill, in addition to ordinary white quartz of every degree of transparency, I found the rose, milky, and smoky varieties, and also a bright blue stone apparently quartz also. Imbedded in the quartz rock was a large crystal, over six inches across, of a dull-blue colour; but as I had no suitable tools with me, it was impossible to get anything but small pieces, into which it easily broke from the effect of long exposure of its upper surface to the weather. Probably it is kyanite.

Evidences of former volcanic action are met with on all sides of the Lake Alaotra in this district; and some miles inland from the northernmost limit, where the land has risen to a considerable height, are various circular

depressions having all the appearance of ancient craters. In one instance conclusive evidence was afforded of the correctness of this opinion; for a gully leading down from one of these depressions had been laid bare and showed cliffs of decided volcanic origin.—J. WILLS.

#### THE PROTO-MARTYR OF MADAGASCAR.

IN the palatial residence of the Duke of Westminster, Eaton Hall, Cheshire, is a magnificent Gothic chapel, which is adorned by a series of stained glass windows, representing the "Te Deum." In one of the two opposite windows illustrating the verse, "The noble Army of Martyrs praise Thee," is a group containing the following figures:—"SS. Ignatius and Polycarp, Bishop Pattenon, Ridley and Latimer with the candle, Savonarola, Huss, James Parnell, a [Quaker] lad of eighteen, who died a prisoner for conscience sake in Colchester Castle; and, in the next compartment, SS. Viva Perpetua, Agnes, the child martyr, Felicitas, with Mary Dyar, Anne Askew and Rasalâma (who suffered in Madagascar). The intention is to shew that martyrdom survives to our own day, and that it is by no means true that sacrifices are not still demanded as tests of Christianity." (*The Graphic*, Jan. 23, 1886, p. 100.) Little could the humble, patient, and simple-hearted Malagasy woman have imagined that within half a century of her death, her name would rank among the martyrs and saints of Christendom, and her figure be emblazoned with theirs in the chapel of one of the most ancient of England's Norman nobility.—ED. (J.S.)

#### THE ETYMOLOGY OF 'ANTANANARIVO' AND 'ANDRIAMANITRA.'

I HAVE long had doubts as to the correctness of the usually received explanation of the meaning of the word Antananarivo, viz. 'City of a thousand Towns,' but could not find a better. Lately, however, in talking with an old and very intelligent Malagasy pastor, he suggested, I think, the right meaning, viz. that Tananarivo or Antananarivo is not 'City of a thousand Towns,' but 'City of a thousand Men,' the full name being, it seems, Tanànarivolàhy; because it had in former times a thousand soldiers stationed in it. The above seems to be by far the most likely explanation; and as it is confirmed by others, I feel quite satisfied that it is the true one.

The former explanation of the name of God, Andriamanitra, used to be 'The sweet scented Prince;' but some ten or twelve years ago, I got a very different explanation from one of the best and most intelligent of our Malagasy pastors, and his explanation was this: He said that *mànitra* meant 'fresh,' as well as 'fragrant,' and that the name Andriamanitra meant 'The fresh, the enduring, Andriana,' the one who never becomes corrupt. In illustration and confirmation of what he advanced, he told me that when Radâma I. died, the corpse was kept in the palace for about a fortnight, until the odour from it was very strong indeed; but no one dared to say what Martha said of her brother; on the contrary, with the most fulsome flattery, some of them said: "*Andriamanitra tokoa izy, fa mbola manitra ka tsy maimbo akory*" ('He is certainly God, for he is still fresh and does not smell at all'). The explanation was received at the time with some poohpoohing; but it seems now to be practically accepted as the best explanation of the name Andriamanitra, and has been incorporated in the recently re-arranged Malagasy-English Dictionary.

Speaking of the name Andriamanitra, I am reminded of a note to a paper on "The Ancient Theism of the Hovas," by the Rev. W. E. Cousins, in the first number of the ANNUAL. After mentioning the various suggestions that had been made with regard to *mànitra*, we have (3) "that *manitra* is



a lengthened form of *màny*, and means weighty, powerful (a suggestion of Dr. Davidson); this meaning of *many* appears in the word *mànìlàhy*, wealthy, powerful, and probably in *màniràno*, dropsy (heavy from water?); comp. too French Dict., s.v. *many*" (ANNUAL No. I. 1875; p. 7).

With regard to *manitra* being a lengthened form of *many*, that is very likely indeed, as *ka*, *ira*, and *na* are most probably only suffixes; but I hardly think it is a lengthened form of that *many* which appears in *manirano* or *manilahy*, as it has no connection with 'weight' or 'power,' but means 'fetid.' *Manirano*, dropsy, does not mean 'heavy from water' at all; it is the name given to dropsy from the odour of the water that comes from the body when it is opened after death. Dropsy is one of the very few cases in which, if a person dies, the body is allowed to be opened, in order to let the water escape, as the people consider it would be wrong to bury one who has died of dropsy in the graves of their ancestors; and the smell of the water that comes from the corpse is such, that the disease is named from it, as they say it is just like *ràno màny*, i.e. stagnant, stinking water. In the Dictionary we find *manilahy* given thus: "*Manilahy*, s. and adj. [LAHY, masculine.] A fern used in vapour baths for malarial fever . . . . Also wealthy, strong." *Manilahy* is a very strong-smelling grass (*àhitra*), I have been told; of course it may be a kind of a fern, as perhaps the Malagasy would not know the difference, and it emits such a strong odour when trodden upon that it is quite overpowering; and a man is said to be *manilahy*, because from personal prowess, or fierceness, or from wealth, he is able to bribe right and left, so that no one can stand before him.—T. T. MATTHEWS.

## LITERARY NOTES.

### NEW BOOKS ON MADAGASCAR.

(1) *Histoire Physique, Naturelle et Politique de Madagascar, publiée par Alfred Grandidier. Vol. I. Géographie. Texte.—1re Partie.* L'Imprimerie Nationale, Paris: 1885; pp. 96, 4to.

(2) *Notice sur les Travaux Scientifiques de M. Alfred Grandidier.* Gauthier-Villars, Paris: 1884; pp. 54, 4to; avec deux Cartes.

Every reader of the ANNUAL will know the name of the eminent French traveler and savant, M. Alfred Grandidier, and will also know that for several years past he has been engaged in bringing out successive portions of

his magnificent work descriptive of this island, which is to comprise no fewer than 28 quarto volumes, with many hundred illustrations in the finest style of chromo-lithography, as well as photographs. Although the volume on the geography of Madagascar is called the 'first,' it has been preceded by several others on the mammalia and birds of this country.\* By the courtesy of the author we have received a copy of the first part of the volume on geography, which consists solely of a historical account of the successive steps by which Madagascar has become known to the rest of the world, from the era

\* For dates of publication of these, as well as other particulars, see *A Madagascar Bibliography*, p. 18.

abo and Ptolemy, through the e Ages, down to modern times. randidier, after a careful exam- n of all the data, believes Madagascar was the island to the ancients as *Menu-*; and to Edrisi, the eminent an geographer, as *Chezbezat*. aborate and minute account is in foot-notes of the steps by successive portions of the coast : island became known and described by different explorers; particulars are given of the ations made for determining ngitude of various points on east. Fifty-one pages of text ollowed by forty-six pages of giving the names and approx- positions of about 1600 places : coasts of Madagascar. Ano- part, issued together with this letter-press, contains a com- eries of fac-similes of all known of Madagascar, from the st rude and imperfect attempts ineate its outline, down to M. lidier's own maps. We hope e in the next number of the AL a very full account of the ific researches of M. Grandi- this country, translated from ork whose title is the second se given above.

*Madagascar. An Historical Descriptive Account of the d and its Dependencies. Com- by Capt. S. Pasfield Oliver, ., F.R.G.S. Macmillan and London: 1886; with 14 Maps iagrams; 2 vols., abt. 560 pp.*

r since Capt. (then Lieut.) Oli- first visit to Madagascar, more twenty-four years ago, as one *suite* of General Johnstone, at me of the coronation of King na II., he has retained a warm st in this country, and has n several books and papers e to it and its people.\* In the es now being printed (of which ber of the proof-sheets only is yet reached us) Capt. Oliver

has brought together a vast mass of information about this country derived from the most recent and trust-worthy sources, and this is given in very full detail; scientific 'proceedings' and 'transactions,' mission reports, consular returns, explorers' and missionaries' journals, etc., etc., being all laid under contribution. The thorough and minute character of the book may be seen from the fact that the first chapter, consisting of a "Historical Sketch" of the country, comprises no less than 176 pages, and contains in appendices copies of all the treaties with foreign powers from the year 1814 down to the amendments of the Anglo-Malagasy treaty of Feb. 1883. The chapters on geography and topography, natural history, population, manufact- ures and trade, are also equally full; and a bibliography of 23 pages contains a number of entries not included in Mr. Sibree's *Bibliogra- phy* published here last year. Accu- racy as to facts and native names, etc., has been secured by the co- operation of several of the L.M.S. missionaries now or recently residing in England. The numerous maps give a special value to this book, one of them being contributed by M. Grandidier. It will be noted that Capt. Oliver only claims to be a 'compiler,' and large extracts are made from previous books and pam- phlets. Of new or original informa- tion, therefore, with regard to Mada- gascar, there is not much in these volumes; but Capt. Oliver has shewn admirable industry in the way in which he has brought together facts of all kinds from all sources, while he has arranged them so as to be very easily referred to. As a book of reference Capt. Oliver's *Mada- gascar* must henceforth take its place as a standard work and indispensable to all who are interested in this country.

The titles of the following French works are taken from Capt. Oliver's 'Bibliography' mentioned above:—

*e A Madagascar Bibliography*, pp. 29, 30; and *ANNUAL IX.*, pp. 17-26, and 122.

(4) *Madagascar. Par H. Castonnet des Passes.* Paris: 1884.

(5) *Vingt Ans à Madagascar. Colonization, Traditions Historiques, Mœurs et Croyances; d'après les notes du Père Abinal et des plusieurs missionnaires de la Compagnie de Jésus.* Par le Père de la Vaissière, S.J. Paris: 1885.

(6) *La France et l'Angleterre à Madagascar.* Par Fernand Hue. 8vo. Paris: 1885.

(7) *Bibliographie des Traditions et de la Littérature populaire de France outre-mer.* Par H. Gaidoz et Paul Sebillot. 8vo. Paris: 1886.

(8) *Madagascar sous Louis XIV. Louis XIV. et la Compagnie des Indes Orientales de 1664. D'après des documents inédits tirés des archives Coloniales du Ministère de la Marine et des Colonies.* 18mo. Paris: 1886.

(9) *Madagascar.* Par Raoul Postel. 18mo. Paris: 1886; avec 5 Cartes.

(10) *La Colonization de Madagascar sous Louis XV., d'après la Correspondence inédite du Comte du Maudave.* Par H. Pouget de St. André. 18mo. Paris: avec Carte.

(11) *Folk-tales and Folk-lore of Madagascar*; vol. i. ("Publications of the Malagasy Folk-lore Society.") Edited by Revs. J. Sibree and J. Richardson. L.M.S. Press; pp. 288. (In Malagasy.) This publication was commenced in monthly parts of 24 pp. more than ten years ago; but after the issue of six numbers, it was discontinued. This year, however, the publication has been resumed, and the result is a volume containing very much of interest both as regards the various dialects of Madagascar and the strange beliefs and superstitions of the people. It includes folk-tales not only from Imèrina, but also from Bètsilèo and the Sàkalàva, as well as fables, songs, riddles, and traditional history, and the larger part of a very full native account of the *Vintana* (or fate), and the numerous native beliefs connected with lucky and unlucky days. Should sufficient encour-

agement be given to undertake another volume, there is still a good deal of manuscript in hand for the purpose, besides the remaining portion of the *Vintana* paper.

(12) We notice, among announcements of new books, the following: *Madagascar of To-day*, by George A. Shaw, F.Z.S., London Mission, Tamatave. London: 'The R. T. S. Library.'

(13) *Madagascar, und die Inseln Seychellen, Aldabra, Komoren, und Maskarenen.* By Prof. Dr. R. Hartmann. Leipzig and Prague: 1886.

This little work forms the fifty-seventh volume of "Das Wissen der Gegenwart," a scientific series which has already done so much for the spread of useful and accurate information amongst the Germanic populations. The author, himself personally acquainted with some of the localities here described, gives as clear and comprehensive an account of the various insular groups in the Indian Ocean as was possible within the available space of 150 pages. Of his space over two-thirds are devoted to Madagascar, whose physical constitution, natural history, ethnology, and political relations are treated with great ability. The best authorities, such as Grandidier, Shaw, Wake, Sibree, and Hildebrandt, have been carefully consulted, and room has even been found for the discussion of such controversial questions as the existence of Sclater's vanished Lemuria, the origin of the Malagasy people, the affinities of their language, and the presence in the island of the Vazimba and other aboriginal non-Malayan and Negrito tribes. Dr. Hartmann is inclined to accept the statements made by Commerson and Modave regarding the woolly-haired and dwarfish Kimo people of the southern districts, and suggests possible affinities either with the South African Bushmen or the Andamanese and Aeta Negritos of the Philippine Islands. The Malagasy he regards as essentially a mixed race, Polynesian, Malay, and

n (especially Galla and Somali) ants being found diversely mingled amongst the Hova, Saka, Betsimisarakas, and other communities. The Comoro, Seychelles, and Mascarennas (Mauritius, Réunion, and Rodriguez) islets are treated with equal thoroughness, and the work is illustrated with a map of the Indian Ocean, an index, and numerous well-executed woodcuts.—From *Nature*.  
*Etude comparative des langues malagache et Malaise, par le R. P. J. P. L. Missionnaire à Madagascar*

This is a small pamphlet of 112 pages, published by the Geographical Society of Paris, and preceded by a prehistorical introduction by M. L. Grandidier. The essay consists of a brief and orderly statement of similarities between the Malagasy and Malay languages noticed by the author when reading the Malay grammar of the Abbé Favre.† To whose attention has never been drawn the evidence on which the similarity has long been recognised as belonging to the Malayan family of languages, this brief essay will be found interesting and instructive; and those who are already familiar with the main lines of evidence, it affords no little surprise that any one at this time of day should draw such a statement as the above, and rest contently in the belief that he had discovered a vein of gold hitherto unexplored. The main lines here given have long been well known, and have been set forth by writers as Baron W. Von Humboldt, Van der Tuuk, and Marre-de-Saunders, to say nothing of various others that have appeared in the pages of this ANNUAL. One paragraph in Père Jean's essay appears, however, to contain new matter, viz.

his suggestion that the Malagasy causatives in *mampi-* and *mump-* are derived from the Malay forms in *mem-per*; thus in Malay we have *anak* (child), *beranak* (to beget), *mem-per-anak-kan* (to cause to beget). These forms do assuredly look wonderfully like their Malagasy equivalents: *teraka* (offspring, descendants), *miteraka* (to beget, etc.), *mampiteraka* (to cause to beget, etc.). If this Malayan form *mem-per* were accepted as that out of which the Malagasy forms arose, the theory of Mr. Dahle (ANNUAL No. IV. p. 92) would of course fall to the ground. There seems, however, one serious objection to Père Jean's theory,—perhaps a fuller examination of kindred languages would show it not to be fatal—viz. that in the examples he gives, the *kan* and not the *ber* seems to be the particle that gives the notion of causation. This brief essay, though it cannot be regarded as producing anything new, is nevertheless a satisfactory statement, as far as it goes, and shows even to a casual reader how the similarities existing between the two languages compared lie in their very nature and structure, and are not simply accidental likenesses in individual words. To one statement of the writer M. Grandidier very justly demurs, viz. that the Hova should be considered the original form of the Malagasy language. Evidence to the contrary would not, we think, be far to seek.

PAPERS AND PAMPHLETS ON MADAGASCAR.—In the *Comptes rendus de l'Académie de Sciences* of Paris (paper read July 20, 1885), is an article entitled:† “Observations on the Fauna of the Island of Great Comoro, to the north-west of Madagascar, by MM. Milne-Edwards and E. Oustalet.” From a careful study of the birds and mammals of this

is critical notice was written last year, but had to be omitted through the demands for space.

*Annuaire de la langue Malaise, par l'Abbé P. Favre*. Vienne: Imprimerie Impériale et

, 1876.

The titles of this and the following papers are, of course, translations of the original French which we are unable to give, as the source of our information (*Nature*) gives them only in French.

island the authors conclude that it is not a geographical dependence of Madagascar, that it was never attached to that region, and that its fauna has borrowed from the surrounding lands. [*Nature*, July 30, 1885; p. 311.] In the same publication (paper read Aug. 31, 1885) is an article entitled: "On certain points in the Physiological action of Tanguin, the Poison used in Ordeals in Madagascar." By M. Ch. E. Quinquand. [*Nature*, Sept. 17, 1885.] We have a contribution to Malagasy craniology in the following paper in the *Bulletins de la Société d'Anthropologie de Paris*, tome ix., fasc. i., 1886:—"On certain Hova and Sakalava Skulls, by M. Trucy." "Both of these cranial groups are dolichocephalic, with an index of about 74, which is nearly the same as that of the Arabs of Algiers and the Pariahs of Bengal. The Hova and Sakalava appear to be more intelligent than any other tribes of Madagascar; but while the Sakalava queen, the ally of France, submitted with her husband to be made the subject of careful anthropometrical observations, she enjoined upon the French officers to punish with death any one who opened or rifled a grave. It was consequently only by artifice and extreme circumspection that M. Trucy was able to obtain crania or other human bones. In the discussion which followed, regarding the mixed characters of the Hova crania, MM. Topinard, Dally and others entered warmly into the question of typical and other distinctions of race." [*Nature*, June 24, 1886; p. 185.]

In *The Chronicle of the Lond. Miss. Soc.* for July, 1886, is a paper by the Rev. W. E. Cousins, entitled, "Bible Revision Work in Madagascar;" pp. 272—281 (reproduced at pp. 209—215, *ante*); and in the same publication for Oct. 1886, by the same writer, is a paper entitled, "Twenty-five Years' Progress in Imérina."

In *The Journal of the Royal United Service Institution*, vol. xxix. No. 132, is a paper by Capt. S. P.

Oliver, F.R.G.S., etc., entitled, "Examples of Military Operations in Madagascar by Foreign Powers, and Native Campaigns, 1642—1881; pp. 1003—1044. Other political pamphlets are as follows: *Ministère des Affaires Etrangères. Documents Diplomatiques. Affaires de Madagascar 1884—1886*. Paris: 1886. — *Rapport fait au nom de la Commission chargée d'examiner la ratification du Traité du 17 Déc. 1885*. (Govt. Papers.) Paris: 1886.

In the *Kölnische Zeitung*, 1886, is a paper entitled, "Beschreibung des Festes der Fandroana in Madagascar," by Mr. A. Levy.

In the *Edinburgh Review* for Jan. 1886 is an article entitled, "France and Madagascar." In the *Proceedings of the Scottish Geographical Society*, 1886, is a paper by Rev. W. D. Cowan entitled, "Travels in Eastern and Central Madagascar; the Present Condition and Commercial Future of that Island."

MAPS OF MADAGASCAR.—"Carte des Environs de Tananarivo (Madagascar) par le P. Roblet. S. J. Echelle au 1/100,000." This map, of 15 in. by 12 in., shows the country as far as Amparafaravato, 15 miles north of Antananarivo, and to Amboanjobé, 7 miles south of it, and from Ambôhimalaza in the east, to Anôsimanjaka in the west. The streams, lakes and marshes are all shown in blue, and the mountains are shaded in brown. Every town and village is distinguished by a different mark, according to population, from hamlets of 10 houses up to towns of more than 500 houses. This is a very pretty and useful map. In *The Chronicle of the L.M.S.* for February is a small map (5 in. by 4 in.) of the province of Antsihanaka by Rev. J. Sibree. This map illustrates a paper by Rev. J. Wills (also in the March number) entitled, "Tour among the Sihanaka." A new and much more perfect, as well as a larger, Map of Madagascar than any yet published in this country is now in course of preparation by Mr. W. Johnson of the F.F.M.A.

BOOKS IN MALAGASY.—*Ny Fambarana sy ny Lalàn' ny Famban-jesosy Kraisty* (Exposition of I., vi. and vii.), by Rev. T. T. Matthews. L.M.S. Press: 8vo, pp. 140, woodcuts and lith. illustrations. *Stories of the Bible* (*Stories of the Bible*), collected by Rev. Matthews. L. M. S. Press: pp. 137.—*Lesona amy ny Kery*, by H. F. Standing. F.F.M.A. Press: 12mo, pp. 95, with lith. illustrations.—*Filazana ny Dogma sasan' ny Ekklesia Anglikana sy klesia maro koa miray Komo-aminy*. Nadikany F.A. Gregory. A. S. P. G. Press: 8vo, pp. xiv. (A translation of part of Harold Browne's well-known "The Thirty-nine Articles.") is an important and valuable addition to Malagasy literature. The only work in the language deals at all fully with dogmatic theology as a whole; and though it is written from an Anglican standpoint for Anglican students, it contains some very much that Christians of other communions acknowledge and

teach. Mr. Gregory has not translated the whole of the English work; and apparently the Malagasy branch of the Anglican Church will possess only 26 Articles, instead of the historic 39. The Introduction (on the book of Nature and the book of Holy Scripture) contains a concise account of modern scientific doctrines, and strongly maintains the position, that 'evolution,' even if ultimately accepted universally, should by no means lead us to abandon our belief in the presence throughout the entire range of natural phenomena of intelligence and purpose.

The following Medical Publications by Dr. J. T. Fox have been issued from the F.F.M.A. Press:—*Ny Boky Klinikaly Voalohany, na Fomba Fizahana ny Marary* (First Clinical Handbook), with illustrations;—*Lesona amy ny Anatomy*, Nos. I. and II., with illustrations;—*Lektora ny amy ny Ratra*, etc. (Lectures on Wounds and Hurts);—*Sary amy ny Anatomy*, Fiz. I. (Anatomical Drawings, 1st pt.)

New Maps of *Kanana* and *Palestaina* (each 2 ft. 6 in. by 1 ft. 7 in.) have also been issued from the F.F.M.A. Press.

## THE SUMMARY OF IMPORTANT EVENTS IN MADAGASCAR DURING 1886.

LITICAL. THE FRANCO-MALAGASY WAR. As every reader of the ANNUAL knows, the war between this country and France was terminated (even before the issue of the 1st number) by the conclusion of a treaty of peace signed at Tamatave on the 12th of December, 1885. The principal points of this treaty are as follows: "The government of the French Republic will represent

Madagascar in all its foreign relations;" "a French Resident with military escort will reside at Antananarivo," presiding "over the foreign relations of Madagascar, without interfering with the internal administration of the states of Her Majesty the Queen;" "Her Majesty the Queen of Madagascar will continue, as heretofore, to preside over the internal administration of the whole

island;" a sum of ten millions of francs is to be paid by the Malagasy Government in settlement of French claims, and of war damages, Tamatave to be occupied by French troops until the full payment of the said sum; and the French Government reserves to itself the right of occupying the Bay of Diego Suarez. Very conflicting opinions have been expressed both in this country and by the European press as to the real bearing of this treaty upon the future of Madagascar. We will not attempt any discussion of these points, only expressing our sincere hope that the treaty may prove to have secured a lasting peace to this country, as well as a continuance of its independence, and an increase of its prosperity.\* On the 28th of January M. Patrimoine (French Consul-General at Zanzibar) and Admiral Miot came up to the Capital as French plenipotentiaries, and returned to the coast after a week's stay in Antananarivo; and on the 14th of May the French Resident-General, M. le Myre de Vilers, with his suite, including M. Buchard, Resident for the Capital, M. Daumas, Vice-Resident, and other officers, arrived in Antananarivo, and took up his residence in the city. The French flag was formally hoisted again in the Capital on the 14th of July. The French Roman Catholic mission was also re-organized in the month of April, the Rev. Père Cazet, formerly Apostolic Prefect, having been appointed Bishop. During the months of June, July and August, the troops which have been stationed respectively at Manjakandrianombana (near Tamatave), at Anòrontsànga, and at Mojangà, for the past three years, returned to Imèrina and were received with well-deserved honour and festivities by the Queen and the people. A new levy of troops has since been made, and the newly-organized regiments,

to the number of from 15,000 to 16,000 men, were inspected by the Queen and Court at a great Review on the 21st of October.

**NEW GOVERNORS AND CONSUL.** During the year several new Governors have been appointed to important positions in place of old inefficient officers. The English Consul for Madagascar, J. Hicks Graves, Esq., has retired, and Lieut. J. G. Haggard, R.N., has been appointed as his successor.

**COMMERCIAL.**—Negotiations have been proceeding for some time past for the establishment in Madagascar of a Bank by an English syndicate; but nothing has yet been definitely arranged. A Telegraph to connect the Capital with Tamatave is to be constructed under French management.

**LITERARY.—REVISION OF THE MALAGASY BIBLE.** The second and final revision is now making satisfactory progress. The Committee has revised to the end of the Psalms, and Mr Cousins, with his three native helpers (Joseph Andrianavovavèlona, Andrianôny, and Frank Rasôamànana) has reached the end of the Lamentations. The revision will probably be completed about May 1887.

**MEDICAL.**—During this year the medical missionaries connected with the missions of the F.F.M.A., L.M.S. and N.M.S. in Antananarivo have formed a Board for the more systematic and united teaching of their students, for examinations in medicine and surgery, and for the giving of a diploma to those students who successfully pass the final examinations. At a large meeting held in the Lecture Hall of the L.M.S. College on the 17th of September the first diplomas were handed by His Excellency the Prime Minister to eight students, who will henceforth be entitled to put after their names the letters 'M.M.M.A.', i.e. 'Member

\* While these pages are passing through the press, it is announced that a French loan for the payment of French claims and war damages (see above) has been accepted by the Malagasy Government; and that consequently Tamatave will soon be restored to the native authorities.

Medical Missionary Academy.' French Resident-General, together most of the foreign community in the Capital, was also on the occasion.

**VELS AND EXPLORATION.** see from *Nature* (p. 612, 1886, Dr. Konrad Keller, a German explorer, was to make a scientific expedition in this country, have no further particulars. Albert Daruty (de Grandpré), the secretaries of the Royal Academy of Arts and Sciences of Paris, accompanied by Mr. A. L. , is now making a exploratory journey through the central and south-

eastern parts of this island for the purpose of forming collections in natural history and botany.

The Rev. R. Baron, F.L.S., has also made a journey of nearly four months' duration through the Antsihanaka province, Mándritsára, and across the island to the north-west, to Anòrontsànga, returning by way of Mojàngà and Mévatanàna. Although this journey was undertaken of course primarily for missionary work, we doubt not that we shall be able to give in our next number many noteworthy particulars of scientific interest collected by Mr. Baron during his long journey.

## X NATURAL HISTORY NOTES.

### THE ORCHIDS OF MADAGASCAR.

† R. H. M. Ridley read a paper on Orchids from Madagascar. The collection (fifty in number) was obtained by Mr. Fox in the neighbourhood of Imérina. Among them are three genera new to the flora of the island, viz. *Arnottia*, indigenous to the Mauritius; *Brownleea*, hitherto unknown from South Africa; *Holothrix*, an East African representative. An interesting novelty is *Satyrium gigas*."—Linnean Society; Dec. 17, 1885; *Nature*, Dec. 24, 1885; p. 190.

### MADAGASCAR CROCODILES.

VIER, in the *Ossements Fossiles*, p. 44, mentions a specimen of a crocodile from Madagascar brought by M. Havet, and considers it the same as one from Continental Africa. I was inclined to do the same with two specimens of the young in spirits, which the Museum received as coming from Madagascar. Lately the British Museum has received a rather large crocodile direct from Mr. Lormier, who has collected in Madagascar; and comparing this specimen and the other two with specimens of *C. vulgaris* from Continental Africa, of about the same size, I find that they all have the same shape, rather longer and slenderer compared with its breadth, and with similar sides. At the same time, the sides of the lower jaw of all the crocodiles from Madagascar are pale and marbled with darker spots, and the sides of the abdomen of the large stuffed specimens are marked with rounded spots placed in oblique cross lines,—two peculiarities which were not observed in any of the specimens from Continental Africa. I am therefore inclined to think they indicate that the crocodile which inhabits Madagascar is distinct from that which inhabits Continental Africa; and I



propose to call it *Crocodilus madagascariensis*. I have seen it somewhere observed that the crocodile of Madagascar is like the crocodile from America, *Molinia acuta*, but this is a mistake; for though its head somewhat approaches in shape and proportion that of *M. acuta*, its skull and the shields of the body are those of a true crocodile.

"*Crocodilus madagascariensis*. The beak slender elongate, with a slight ridge on each side of the central line, united just behind the nostrils. Sides of the lower jaw pale, with large irregular black spots. There are three specimens of this crocodile in the British Museum."—Dr. J. E. Gray, F.R.S., in *Proc. Zool. Soc.* 1874; p. 154.

"Among the recent scientific missions ordered by the French Minister of Public Instruction, we find the following:—M. Bordas, to study the zoology of the Madagascar Islands, of the Seychelles and Comoros."—*Nature*; July 2, 1885; p. 209.

"*Entomological Society*; March 3, 1886. Mr. W. J. Williams exhibited on behalf of Mr. C. Bartlett, a gigantic hairy and spiny larva, perhaps allied to *Gastropacha*, from Madagascar."—*Nature*; Mar. 11, 1886; p. 455.

It may interest those who study the natural history of Madagascar to hear that a specimen of a male Aye-aye has recently been obtained by the Rev. J. Wills from the upper belt of forest to the east of Imerina. Hitherto it had been believed that this animal was confined to the lower and hotter forest region of the country; but it appears to have a wider range than was formerly supposed to be the case.—EDS.

X  
RAINFALL OF ANTANANARIVO FOR  
THE YEAR 1886.

Month.	No. of days rain fell.	Quantity.	Rainfall for 1885.	Average fall from 1881—1884.
		inches	inches	inches.
January ....	14 days	2'58	16'91	13'56
February ..	12 "	4'07	14'10	7'78
March ....	14 "	11'14	2'47	8'53
April ....	6 "	1'54	1'22	1'41
May .....	4 "	'67	'35	'90
June .....	3 "	'21	'30	'11
July .....	2 "	'18	'00	'075
August ....	1 "	'06	'42	'32
September..	2 "	'23	2'05	'405
October ....	7 "	3'02	1'06	4'70
November..	6 "	3'65	5'16	5'735
December..	23 "	19'28	8'15	9'38
<i>Total.....</i>	94 days	47'28	52'19	52'805

ED. (J.S.)





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MADAGASCAR MAGAZINE.

*A RECORD OF INFORMATION ON THE TOPOGRAPHY AND NATURAL PRODUCTIONS  
OF MADAGASCAR, AND THE CUSTOMS, TRADITIONS, LANGUAGE,  
AND RELIGIOUS BELIEFS OF ITS PEOPLE.*

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ERRATA.

- Page 324. foot-note ‡, 2nd line, for "a old friend," read "an old friend."  
„ 336, 5th line from top, for "of the *west* coast," read "*east* coast."  
„ 385, right hand column, 19th and 20th lines from top, for the  
marks X, twice, substitute in each case the marks +.

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No. XI.—Christmas, 1887.

(PART III. OF VOLUME III.)

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1887.

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EDITED BY THE  
REV. J. SIBREE, F.R.G.S.,

AND

REV. R. BARON, F.L.S.,  
*Missionaries of the L.M.S.*



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\*: The Editors do not hold themselves responsible for every opinion expressed by those who contribute to the ANNUAL, but only for the general character of the articles as a whole.

THE  
ANTANANARIVO ANNUAL  
AND  
MADAGASCAR MAGAZINE.

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OVER NEW GROUND:

*A JOURNEY TO MANDRITSARA AND THE NORTH-WEST COAST.*

SINCE the retirement of Mr. Pickersgill in 1882 from the Mission at Mojangà, the churches and schools in connection with the London Missionary Society in the Ibòina District had been left until the closing months of last year (1886) without either visitation, help, or superintendence of any kind. This was due, not to any desire to abandon the work which Mr. Pickersgill commenced, but to the disturbed state of the country in consequence of the war which continued so long between the French and the Malagasy, and which was carried on perhaps with more vigour on the north-west coast than in any other part of the island. The Imérina District Committee, however, determined, as soon as circumstances permitted, to send one of their missionaries to this district to re-organise the churches and schools in so far as a brief visit would allow, to encourage the people in their profession of Christianity, and to report generally on the condition of the work. Accordingly I was asked to undertake the journey and, on my way, to visit the churches and examine the schools in Antsihanaka and Màndritsàra, Mr. Peill accompanying me as far as Antsihanaka. Having given an account of the churches and schools elsewhere, and on more than one occasion, I shall, in the present paper, confine my remarks to a description of the country, etc.

A journey of this kind, although by no means attended by the dangers and hardships almost inseparable from African travel, is not without its trials, and the first thing to do there-

NO. 11.—CHRISTMAS, 1887.

fore is to lay in a stock of patience and readiness to "rough it," without which articles you had better stay at home. You must not be too fastidious about the houses you sleep in, even though you should have a dozen black pigs as sharers of your bedroom; you must not be alarmed at the risky craft you may occasionally have to cross a river on, with your body somewhat below and somewhat above water. If your bearers are taken ill or sometimes turn obstinate; if the road leads through mud and mire, or is rendered dangerous by the presence of marauding bands of robbers; if you have to travel with the thermometer at 140 F.; if a thunderstorm overtakes you and soaks you through, you must endeavour to bring your mind to the exigencies of the situation and to make the best of it. Travelling in England and in Madagascar are two totally different experiences. Here, it is needless to say, there are neither roads, railways, hotels, coaches, nor other conveniences of civilization, and consequently there are numerous little difficulties to contend with that are altogether unknown in our own favoured isle. Difficulty number one is that of getting together your luggage; number two is that of securing your bearers; others will follow in good time. As for difficulty number one, it is greater than it seems. When Gordon was sent to Egypt, he was on the Continent the day before his appointment, on the next he was on his way to Khartoum. You cannot do things in a hurry here, however; despatch is an exotic that has not yet taken root in Madagascar. Even in Antananarivo you have to send here and there and everywhere before you find the articles you need. If you want a tin trunk, you have to hunt up a tinsmith, who lives in some unnamed back lane. If you want a pair of boots, you must send your man to find a shoemaker, who resides in some unknown quarter, and who, when found, is as likely as not to be engaged in *fànompòana* (compulsory and unpaid government service) and not able to attend to the job; or who, if free at the time, comes to bargain with you (a most trying proceeding), generally asking much more than he finally accepts. Then there is the hiring and securing of your bearers. They are easily hired, but not so easily *secured*, unless you pay them unreasonably high wages. The difficulty is rendered all the greater if the journey is through a part of the island not often traversed, or through territory where malarial fever rages, or if it is to be undertaken at a time which will render absence from Antananarivo necessary during the *Fandroana* festival. Before leaving for the north-west, I wrote down the names of nearly twice as many men as I needed, in order to secure a sufficient number; but when it came to actually starting, the majority of them did not appear. On the

morning I was to leave Antananarivo one of the men came to say that he was sorry to have to beg off, but that he had some *fanompoana* to do; another man came to tell me that his master had died suddenly, so begged to be excused; and a third said that a peculiar disease had overtaken him: it began in his toes, passed through his feet, up his legs, and gradually mounted upwards until it reached the crown of his head, when it slowly descended again to his toes, only to return to the crown of his head and back again, like the rise and fall of a thermometer! Several of the men I took with me were Mozambiques, who, as rule, prove hardy, hearty, and trustworthy.

We left Antananarivo on Tuesday, September 7th; but on reaching the foot of the hill on which the Capital stands, the two hindermost men called out that a couple of bearers of luggage had disappeared, so one of them was sent off to seek the missing individuals; but being a long time away, his companion ran after him to see what had become of him, when he appeared from an unexpected quarter, and in turn had to go after his fellow. They thus kept up a mutual chase, to our great amusement, for fully half an hour, and in the end, when the men were actually counted, it was found that none of the bearers were missing, but that the two last men had simply forgotten to count themselves.

After four or five days' travelling over the bare hills of Ime-rina, we reached the village of Ambodinonoka in Antsihanaka. Here Mr. Peill and I commenced a series of school examinations which lasted a fortnight, the result of which both pleased and astonished us. These examinations were held in six different centres, viz. at Ambodinonoka, Amparafaravola, Ambohijà-nahàry, Tsàrahonénana, and Anòsimbòahàngy.

The people on the western side of Lake Alaotra were, at the time of our visiting them, in a state of great distress on account of depredations committed by large bands of Bàra or Sàkalàva marauders. Several villages had, a few day previous to our visit, been pillaged by these desperate robbers. At one of them, Ampàndrana, a band of these robbers had recently carried off 900 oxen and 45 women and children, and had speared six of the men who dared to offer resistance. In another place, 3000 oxen and some half-dozen women and children had been swept off. We felt a little trepidation while spending the night at Ambòhitromby, for only a week before, a village immediately to the north, and three days before, one to the south, had been attacked by the robbers. Ambohitromby consists of some fifty or sixty houses, but there were not more than about a dozen individuals sufficiently courageous to stop

in the village during the night. The great bulk of the inhabitants, especially the women and children, had resorted to the marsh, where, hidden away among the tall rushes, they had erected temporary huts. Many of the villages were thus deserted at night. It may easily be imagined in what a state of fear and anxiety these poor Sihànaka were living. Many of them had lost their wives and their relatives and slaves. Those who have not travelled much in Madagascar, especially in the border lands between the Sakalava country and the centre of the island, have little idea of the extent to which the people suffer from the raids of these desperate highwaymen, who generally go in such large numbers and so well armed that the people are entirely at their mercy. For many hundred miles along the western border-land rapine and murder are committed by these robber bands with impunity from year to year. And there is no redress. The authorities seem to be helpless in the matter. So great is the danger of a night surprise (and indeed of a mid-day surprise even) in some of these places, that the people form underground passages with a secret entrance from each house, by which they can make good their escape in case of need. The very difficult and intricate entrances to some of these villages, with the thick and impenetrable barriers of prickly-pear and other thorny shrubs, are witnesses to the wild and unsettled nature of many parts of the country.

The great plain of Antsihanaka has more than once been described; suffice it then to say that the greater part of it consists of an immense marsh, some 30 or 40 miles long by about 15 wide, covered with a dense mass of vegetation composed, for the most part, of *Hérana* (*Cyperus latifolius*, Thouars), *Zozóro* (*Cyperus aequalis*, Vahl), *Bàraràta* (*Phragmites communis*, Trin.), and *Vóndrona* (*Typha angustifolia*, L.). At the north-west corner of the marsh is Lake Alaotra, about 15 or 20 miles long, by three or four wide. It cannot, however, be very deep, as water weeds may be found at the close of the dry season nearly across its surface.

Now there is one very interesting fact which I discovered with regard to this lake, and that is, that it once extended over an immense tract of country, not only over the marsh and the flat lands on the western and southern parts of the Sihànaka plain, but over an extent of territory at least 200 miles in length, and perhaps 15 or 20 miles in average breadth; that in fact its northern limit reached at a remote period farther north than 15°, 30' Lat. (how much farther I cannot say), and as far south as 19° Lat., and that, moreover, the height of the lake, as it for-

merly existed, actually reached 1140 feet above the present surface of Alaotra. The proofs of the former extension of the lake are as follows: to the west of the lake an old terrace several hundred feet above Alaotra (though how many I cannot say) may be traced for a long distance in a northerly and southerly direction. Not only so, but old lake bottoms may be seen at various heights above the lake. There is first the marsh, a great part of which is still flooded when the water is high; then the level grassy plain fringing the marsh, where great herds of cattle are pastured; then other more or less level tracts rising at successive heights above the plain and visible here and there, showing where the water has once been. To the north of Anosimboahangy and Ambâtobè again, old lake terraces and lake bottoms exist in abundance and are most distinct. One of these is eight or nine miles long and 800 feet above Alaotra. A mere glance at some of them is sufficient to shew their character.

Anosimboahangy is a village (or rather, a cluster of villages) situated on small islands in an extensive marsh, surrounded on all sides by an almost continuous terrace. This marsh, once a lake (which is nearly 600 feet above the present surface of Alaotra), and occupying a depression in the country, has been left up among the hills on the sinking of the waters. Further north still the ground rises, and though it has mostly been under water, few distinctly level lake bottoms are visible. They have become old and defaced with age. On all these lake beds smooth waterworn pebbles, iron nodules, and here and there conglomerate and sandstone, may be found. In one place, where a good part of the low hill (*tanèty*) has been eaten away, there is a horizontal layer of large rounded stones. We did not discover in any of these terraces or lake beds any fossils, though a year or two ago, in Ankay plain (the southern extension of this ancient lake), I found numerous fossil leaves, fruits and stems of plants (see ANNUAL No. VII. p. 61). To the north-east of Mandritsara, however, there were in the old lake beds innumerable tubular holes,  $\frac{1}{2}$  in. to  $\frac{3}{4}$  in. diameter, and a foot or more deep, filled up with hardened earth which might be taken out in short ruler-like pieces. These holes may possibly have been the homes of a burrowing mollusc. To the east and west of this extensive sheet of water long ranges of hills (though not absolutely continuous) stretch far away to the north and south. Now these ranges form the remnants of an immense arch or great mountain wave, which geologists call an anticline. This arch has not only been worn off by the denuding agents of time (not improbably, in the first instance,

by the action of the sea waves taking advantage of a fissure but has also been deepened into a longitudinal trough, of which Alaotra probably lies in the deepest portion. Indeed this (or trough, as it is at present) forms an integral part of the framework of the country, and was doubtless produced during the period when the island was being uplifted from the sea. At the north-west end of Lake Alaotra there are one or two outcrops of basalt, but I could see no volcanic cones. Quartz is extremely abundant in the northern and eastern parts of the plain, and the rocks, for the most part, about the northern end of the lake contain a large percentage of magnetic iron.

About twenty or thirty miles to the north of Ambatobe, at a place named Anàlaròamàso, there is a considerable deposit of siliceous sinter, which has embedded within it particles of quartz and pebbles. Ten or twelve miles further north again there is a second deposit of a similar character, where there is also a circular hollow, with a border of sinter. This has doubtless once been a geyser, whence the water with the silex in solution has issued. In one or two places also we saw what appeared to be miniature craters. Another point is perhaps worth mentioning with regard to this part of the island: it is that the inner line of forest (the one on the eastern confines of Imerina does not, as marked in maps of Madagascar, join the main line of forest to the north-east. It ends somewhere to the west of Amparafaravola. Probably it was continuous with the main line one time, since forests in Madagascar are so ruthlessly destroyed by the natives.\*

After leaving Ambatobe, the road passes through uninhabited territory, the next village, Ambalavary, being four days' journey to the north. The country, for the most part, is well wooded, a great part of it is covered with forest, the thickest part of which is to the north of the valley known as Andalanafindra. The comparatively level country and the good wide pathway rendering travelling pleasant, and never did I more enjoy a journey through Malagasy forest than I did through that between Andalanafindra and Ambalavary. Various trees and plants, not found in Imerina, make their appearance here. There was a fern which was particularly striking, and which I had never seen before. It was a climbing fern, clinging close to the trees which it reached its habitat. Most of the leaves were button-shaped, about 1½

\* At one of the villages Mr. Peill and I visited we counted the young trees that had been used in making the palisade round it, and we found that about 10,000 had been thus employed. These are renewed every eight or nine years. When in Betsileo I remember seeing a road which had been cut through the forest in order to drag a gravestone through it. 25,000 trees had been thus destroyed. These, however, are not the only ways by which the forest is being consigned to destruction.

diameter, and thick and fleshy. These were probably the young ones; but those in fructification were about 3 in. long, and  $\frac{1}{4}$  in. wide. Close to our encampment in the valley of Andalanafindra there was a human skeleton, that of a soldier who, returning home from the war, was taken ill on the road, and was left by his companions to die alone. Soon after leaving the forest, several very level lake beds may be seen at various heights. On one of the lowest of these, close by the road-side, there is a crater-shaped hollow. It is as remarkably perfect and regular in outline as it could possibly be, and it is impossible to account for it except by volcanic action.

A little further on in front rose Ambiniviny, the noblest mountain I ever saw. It is one vast precipice, rising from the valley below to the height of fully 2000 feet. It is almost enough to make one dizzy to look up at it; it must be simply awful to look down from its summit. Ambiniviny is the abrupt northern end of a long ridge of gneiss running in a N.N.E. direction for a distance of about 30 miles. From Ambiniviny the ridge takes a sudden sweep round to the N.N.W., forming a precipice several miles in length; but, with the exception of the break in the hills to the south of Ambalavary, the range, more or less regularly, continues north and, some of the people say, runs as far as Antomboka, at the extreme north of the island.

The road descends some 1400 or 1500 feet through this break in the range, until the village of Ambalavary is reached. We are now in what may be called the Mandritsara valley, which is bounded on the east by what appears to be a range of mountains, but which is in reality an elevated plateau (nearly 2000 feet above the valley) and the bed of the old lake mentioned above. In descending into this valley either from the south or east there is quite an abrupt change in the character of the flora. The Tamarind, *Adabo* (*Ficus sp.*), a species of *Rôtra* (*Eugenia sp.*, a large tree), *Sakdana* (*Sclerocarya sp.*), and other trees, none of which are found in any but the warmer parts of the island, become common and occupy all the valleys and river courses. The Mandritsara valley is *not* volcanic, as has been supposed. There are numerous short hill-ranges and detached hills of a black and barren aspect, but these consist of gneiss, occasionally fissile in structure and weathering into spheroids. Crystalline limestone and graphite are also found in one or two places near Mandritsara.

We slept at Ambalavary, at the eastern foot of Ambiniviny, where the chief occupation of the people, who are Hova, is the manufacture of rum, which is drunk to a fearful extent by almost all the Malagasy tribes. It is not merely the Bêtsimisa-



raka who are given up to intoxication; drunkenness abounds quite as much among the Sakalava, Bara, etc. It is only after travelling in various parts of the island that one begins to realize how almost universal is the love of the people for *tôaka* (native rum).

It may be as well to state here that the town marked on the map *Màrotandràno* (not *Màritandràno*) ought really to be *Isòaniadanana*. It is a town of perhaps 100 or 150 houses, sufficiently important to possess an officer with 11 honours as its governor. *Marotandrano* is a Sakalava village of some thirty houses, a little to the west of the road. To the east of the road again there is a village of about 20 houses inhabited solely by Mozambiques. Of these three elements of population the Sakalava much preponderate; then come the Hova, next the Mozambiques or *Makôa*, or *Zàzamànga*, as they prefer to call themselves. It seems that these 'Sakalava,' so called, are not really such, and that the name is a misnomer given them by the Hova. Their tribal name is *Tsimihety*, and they are in no way allied to the pure Sakalava.

We next proceeded to *Mandritsara*, the most important town in this part of the country. It is about 15 or 16 miles north of *Isoaniadanana*, and consists of about 300 houses. The population consists of Hova and *Tsimihety*; but on the southern bank of the river *Mangàrahàra*, which flows at the foot of the low hill on which *Mandritsara* stands, there is a town of some fifty houses inhabited entirely by Mozambiques. There is really no district known as *Mandritsara*, and what is marked as such on the maps should be *Andrôna*, the southern boundary of which is *Ampantàkamàrorèny*, and the northern, the River *Sofla*. One thing that struck me with regard to this part of the island was the scantiness of the population. I expected to find a considerable number of good-sized villages, whereas *Mandritsara* and *Isoaniadanana* seem to be the only two of any importance. There are, however, a good many scattered hamlets of from six houses and upwards even within comparatively short distances of *Mandritsara*.

Leaving *Mandritsara* the road leads over the south-west end of *Bèmolàly* ('much soot,' or 'besooted'), a mountain almost as black and forbidding as its name implies, though it is only one of many such in this part of the country. The character of *Bemolaly*, however, is somewhat redeemed by the presence of two shrubs, bearing perhaps the prettiest flowers I have seen in Madagascar. One of these is a *Bignoniad*, with tufts of large yellow trumpet-shaped flowers at the ends of the branches. But its fruit is as uninviting as its flowers are attractive,

being covered with numerous grappling hooks about an inch long, exactly like a four-pronged anchor. It is almost impossible after taking hold of it with the hand to get it off again without its tearing the flesh. The plant flowers when it is bare of leaves. The second shrub, an Apocynad (probably a species of *Pachyodidium*), is a succulent thorny plant, much swollen at the base of the stem, which, like the last, is five or six feet high. From a tuft of leaves at the end of the branches there proceeds a bunch of gorgeous scarlet flowers. Both these plants grow on the bare rock, where it is exposed at the surface. They would make real ornaments in conservatories. Mango trees of enormous size, though not so large as those on the west coast, are very abundant in the valleys here; and the fruit must literally rot from an insufficiency of consumers.

On the first day after leaving Mandritsara we saw two or three flocks of the small green parakeets, sometimes called love-birds (*Psittacula cana*, Gm.); and also a flock of guinea-fowl. The parakeets, which have a very swift flight and are gregarious, are only found in the warmer parts of the island. The guinea-fowl, though not inhabiting the highest regions of the country, ascend to a colder climate than the parakeets dare venture to. Both these birds are extremely abundant in the western parts of the island.

On the second day after leaving Mandritsara we entered a region of granitic gneiss, which soon passed into a pinkish granite, in many parts porphyritic, and in one or two places rising into dome-shaped bosses. One of these is surmounted by two blocks of stone, at one of which Radàma I., in one of his military expeditions, is said to have practised his hand as a marksman. Near another of these bosses, which rises out of the valley to the height of perhaps 100 feet, there is a piece of what is evidently calcined gneiss raised on end, so that its dip corresponds with the face of the granite. The calcination is very marked, and numerous mineral crystals (chiefly garnets) have been developed in it. This granite therefore is eruptive and not metamorphic.

The fan-palm known as *Sàtramira* first makes its appearance here and continues almost to the sea-coast. It is a tree about 12 feet high and is probably a species of *Hyphæne*. The fruit is largely used by the Sakalava in the manufacture of rum. The tree divides into two, three, four or more branches, which rise from the very surface of, or even somewhat under, the ground, so that they seem almost like separate trees forming U-shaped figures.

We spent the night of the second day after leaving Mandri-

tsara at Ambòdimañary, a small village of six or seven houses on the northern bank of the river Sofia, and at the southern foot of the Sàhantòana mountain. The river Sofia is here a wide but shallow stream. There is no town named Sofia, as marked on the maps, neither is there, properly speaking, a town named Bèfandriana, as also given on the maps. Befandriana is the name of a mountain, and also the name of the district. What is given as the town of Befandriana is really Isombòana, sometimes called Andròvanimàvo, because the governor of the district (who, by the way, is under the governor of Antsihanaka), a Sakalava of 11 honours, is named Ramàvo. This is one of the very few places where there is a non-Hova governor. The river Isomboana, rising a little to the east, flows past the south side of the town. It joins the Ankazambo (which flows a mile or two south of the town); the Ankazambo joins the Tsínjomòrona, which flows into the Doròà; and this last empties itself into the sea somewhere between the river Anjingo (given on maps as Antsingo) and the Sofia.\*

From Isomboana onwards to the sea the country becomes comparatively level (or rather, covered with innumerable very low hillocks from 20 to 50 feet high), with a low hill-range away to the west, and an isolated mountain here and there. The valleys between the hillocks are mostly occupied by marshes or ponds. A long valley of some 15 to 20 miles runs to the south, and a range of mountains immediately to the east runs for away to the north. The strike of the gneiss is in a northerly direction, with a dip to the east of about 60°.

On our arrival at Isombòana, the population of which consists almost wholly of Hova, we found dwelling in small extemporized huts by the river side a large number of Sakalava, who had been collected from the surrounding country to do *fanompoana* in the shape of building a new residence for the governor. This, however, was not the only building that was being erected in the town, for, as there had been a recent fire, nearly all the houses, some fifty or sixty, had been burnt down, a frequent occurrence in these villages, where the houses are built of palm leaves and grass and placed in close proximity; for if one takes fire, the whole town is almost sure to be destroyed.

From Isomboana to Andrànosamònta (*samònta*=high tide, or rather, the tide at its highest) is four days' journey. As one nears the sea the country becomes covered with large blackened and rounded blocks of gneiss. I expected soon after leaving

\* The geographical errors pointed out in this paper have been corrected in Mr. Johnson's recent map issued from the F.F.M.A. Press, in which also the map of the district traversed as far as Anòrontsànga has been embodied.

Befandriana to reach the limits of the gneiss, but, with the exception of basalt, which I found in one place, the ~~gneiss~~ <sup>gneiss</sup>, with a dip of  $70^{\circ}$  or  $80^{\circ}$  to the west, stretches as far as the village of Iraony, not many miles from the sea.

After leaving Isomboana, we slept at the small village of Ampòtamainty, a little to the south of the hill Mahèrivàtratra. Next day we had our mid-day meal in a wood with a stream running through it, but the *Mòkafòhy* (a small stinging fly) were so abundant that we were heartily glad to quit the place.

We encamped for the night on the northern bank of the river Anjingo. After we were comfortably ensconced, a very heavy shower came on accompanied with thunder and lightning. Several *Saobakàka* (a species of frog or toad), but different from the *Saobakaka* found in Imerina, visited us in our tent. Also a very large *Tàrabiby* (a species of *Mygale* ?) looked in to see what was going on. This certainly was a most unwelcome visitor, and some of the men quite shrieked with fear, for, if native accounts are correct, the bite of this spider is fatal. It is a trap-door spider, but leaves its hole open, in the same way as the spider known as *Ambóabé* in Imerina. After we had laid down to sleep (for the rain pouring down unmercifully upon us, I had accommodated nine men in my tent), it was discovered that we had fixed the tent over an ants' nest. The men, however, forcibly stopped up the entrance, and, as far as the mosquitoes would allow, they got a comfortable night.

For the greater part of the next day the road followed the bank, sometimes the bed (for the river was now very shallow), of the Anjingo. We stopped to rest under the shade of the trees by the side of the river, and had a refreshing bath. The men caught an eel and also a couple of *Flamèna*, a fish about the size of a trout. Prominent among the vegetation which clothed the river banks and made the scene beautiful were a *Barringtonia* (*B. speciosa*), with its long pendent spike of flowers, the *Rótra*, a very large tree common on the banks of rivers in this part of the island, the *Sohihy*, also found along the river banks of West Madagascar, the *Adàbo* (*Ficus* sp.), a species of prickly *Mimosa* (*M. asperata*), a palm, a pandanus, the Jack-fruit tree, with its enormous fruit, as well as numerous other trees and shrubs.

Next night we slept at the village of Iraony, near which there is a largish river of the same name. A mile or two to the north of the river there is a beautifully situated small lake named Andràmponga, a resort of wild-fowl and crocodiles. Near Iraony the gneiss passes under limestone and sandstone formations. A light-coloured sandstone was the first of the

sedimentary rocks that came into view, but a mile or two further on a grey hard limestone made its appearance, which was crowded with fossils, especially bivalves and gasteropods.\* The sandstone, however, was the prevailing rock, and attained a great thickness further west, where a range of hills, running for many miles in a northerly and southerly direction, occupies the peninsula to the west of Radama Bay. Indeed the greater part of the country hereabouts is covered with sandstone, which dips seawards at an angle of about six degrees. Both the sandstone and the limestone lie unconformably on the gneiss, indeed the gneiss, where it passes under the sandstone and limestone, is nearly vertical (having a dip to the west of about 80°). The vegetation, as one nears the sea, with the exception of the trees and shrubs which seem particularly to love the river sides, consists mainly of *Satramira*, *Satrambe*, *Vôavôntaka*, *Sakôana*, *Bondra*, and *Mâvoravina*, which are spread far and wide over the country, while the valleys are occupied chiefly with *Rofia* palms and, if sufficiently moist, with *Viha* (a large arum). Of course numerous other plants are found, but the above constitute the chief forms of vegetation. The *Satramira* and the *Satrambe* are both species of fan-palm (*Hyphæne*!). The *Vôavôntaka*, a low prickly tree, with a fruit much like an orange in appearance, but much larger and with a hard shell, is a species of *Strychnos* (*S. spinosa*, Lam.). The *Sakoana* (*Sclerocarya* sp.) is a tree which supplies an edible fruit about the size of an apple, but with an acid taste. The *Bonara* (*Albizia Lebbek*, Benth.) is the *Bois-noir* or Black-wood; and the *Mavoravina* (which belongs to the Order Malpighiaceæ) is a tall shrub or small tree with long, weak, straggling branches, which appear as though they had once been in the habit of climbing, but had recently resolved to lean no longer on others for support.

The birds here were nearly all unknown to me. The *Goaika* (a crow, *Corvus scapulatus*, Dand.), *Papàngo* (a kite, *Milvus ægyptius*, Gm.), *Tsikorôvana* (a fruit-thrush, *Hypsipetes ourovang*, Gm.), *Kaitso* (a cuckoo, *Coua cærulea*, L.), *Toldho* (a lark-heeled cuckoo, *Centropus tolou*, Gm.), *Kankàfotra* (a cuckoo, *Cuculus Rochii*, Hartl.), *Vôrompôtsy* (an egret, *Ardea bubulcus*, Sav.), *Manàrana* (a

\* I may say that we found fossils in many places, not only on the road to Anorontanga but also between Mojanga and Antananarivo, in fact wherever the limestone occurred. I hope at some future time, after their identification in England, to give a list of them, and the localities where found, as also further particulars of the geology generally of the north-west of the island than are given in this paper. Suffice it here to say that the fossils consisted of *Ammonites*, *Belemnites*, *Gryphæa*, *Nautilus*, *Ostrea*, *Pentacrinus*, *Micraster* (?), etc., presenting a series of forms which almost certainly belong to the Cretaceous or Jurassic formations. A little to the north of Majamba Bay on the sea-coast we found Nummulitic limestone.

species of cormorant ?), and the *Akanga* (guinea-fowl) were about the only birds I recognized. The *Akanga* are very abundant and afford excellent food. The *Toloho* too are exceedingly common. After some four hours' travelling from Iraony we came to the river Mèvaràno, which is the northern boundary of Befandriana. As we were crossing the river, a singular occurrence took place. Two crows were quarrelling and pecking at one another in the air, when suddenly one fell helpless into the water. We found that its wing was broken. We set it free, and it seemed quite astonished at its inability to rise in the air. However, it went skipping off under the trees.

We stayed a day or two at Andranosamonta, a village of about 100 houses, situated on the south-east bank of the inlet of the sea known as Radama Bay. Leaving Andranosamonta, our road led northwards. In an hour or two we came across a bed of shale with numerous fossils, more especially species of Belemnites and Ammonites. The Belemnites seem to be common in many localities in the western parts of the island. The Sakalava use them as rattle balls and call them *bdlahàra*. Some of the Ammonites are of large size; one we saw was fully a foot in diameter.

About a mile and a half to the north of the village of Mahitsihazo the road leads up an ascent on which there is a rather remarkable rock. It is about the size of a cottage and rests apparently on the sandstone. But it is most curiously though irregularly guttered with deep and somewhat canoe-shaped channels, some of which are fully a yard in depth. It is as though it had been put into a lathe and gouged, leaving ridges and prominences between the channels, which, however, are not continuous round the rock. In the valley immediately to the south there is another of these curious rocks, and to the north there are several others. From under one of them we obtained a kind of blue clay, which was apparently mixed with decayed sandstone. They seemed to me to be perched blocks, as there was no hill near from which they could have fallen, nor any rock of the kind *in situ*. I could think of no agent to account for their occurrence but that of glacial action. But having an appointment at the time, I could only examine them in a cursory manner; I leave the matter therefore to be determined by future travellers. The country here becomes hilly, with frequent patches of forest. It reminded me of the Tanàla country to the east of Bètsilèo; the vegetation, however, is quite different from that of the interior, or that of the eastern part of the island. The Traveller's-tree (*Ravenala madagascariensis*, Sonn.) becomes common, but the *Adabo* and the

Tamarind tree are not so abundant as they are further inland. Among the trees and shrubs I recognized here the graceful Bamboo (*Nastus capitatus*, Kunth.), the *Kòropétaka* (custard apple?); the Cardamom (*Amomum Daniellii*, Hook. fil.); the *Sorindrana* (*Sorindia madagascariensis*, DC.), a tree with sweet edible fruit in bunches; and others.

To the east of Andranomalaza, where we slept after leaving Andranosamonta, there is a remarkable hill named Angoraony. It is composed entirely of sandstone in numerous and almost horizontal beds. It has quite a unique cathedral-like appearance; I know nothing at all similar to it in Madagascar.

Leaving Andranosamonta, the next day brought us to Ankaramy, where the Malagasy forces were encamped during the war with the French. It is a large town (for Madagascar) of some 500 houses. Before the war it was of no great importance, and now that peace has been restored, many of the people are returning to their homes, so that it is becoming considerably deserted.

We next proceeded to Ambòdimadiro, which is about seven hours' distance north of Ankaramy. The road passes frequently through patches of forest, which branch out from the great mass of vegetation which clothes the mountains immediately to the east. Apparently the forest, which runs round the northern part and then down the eastern side of the island, commences hereabouts. It seems to be generally believed that this forest forms a continuous belt around the island; personally I have long doubted the existence of any such continuous forest. In the western part of the country there are no doubt forests here and there, sometimes of great extent, but they do not seem to be continuous, unless indeed country with abundant, but mostly open, vegetation is reckoned as covered with forest.

Ambodimadiro lies in a snug hollow on the sea shore, with abundant trees and shrubs in its neighbourhood. Nòsibè may be seen quite distinctly in the distance. The town of Ambodimadiro was in the hands of the French during the time of the war; the Hova have again returned to it, though the inhabitants are as yet by no means so numerous as they were four or five years ago. The place is, however, gradually increasing, and will doubtless soon assume its former importance.

On the sea shore here the rock is of slate-like appearance; it is, however, a limestone, or rather, a limestone shale, black, split up into numerous joints, and traversed by numerous dykes. Our next destination was Anòrontsànga, which we meant to reach by sea. There were, however, no boats in the harbour at the time, and we had to wait two days before one made its

appearance. As it was too small to accommodate more than eight or nine of us, the remainder had to go by a *lakam-piàra* or outrigger canoe.\* As the wind was unfavourable, it took us two days to reach Anorontsanga. On the first day we caught a couple of 'Sucking-fish' or Remora (probably the *Echeneis naucrates*), that strange fish with the flat disc on its head, by which it attaches itself to ships, sharks, etc. We found them excellent eating. We had our mid-day meal in one of the villages belonging to Benao, a Sakalava chief who, during the recent Franco-Malagasy war, fought against the Hova. This was the only place in all our journey where no official enquiries were made after the Queen, Prime Minister, etc., indeed we appeared to be unwelcome visitors. However, the stiffness of the chief man somewhat relaxed after a little conversation, and he brought me a chair, and on our departure gave me four young cocoa-nuts. That night we cast anchor near the shore and slept on the boat, but the rolling was so heavy that we could only get snatches of sleep. In the night we had a shower of rain, upon which the boatmen put over our heads a very uncomfortable greasy oil-cloth, full of holes, which dripped at a score of places, allowing the dirty water to trickle all over us. Fortunately, however, the rain did not last more than a few minutes. The next day brought us to Anorontsanga, where we were warmly welcomed by the worthy governor, Rakotovao, 13 Honours, and his staff.

Perhaps it is needless to say that Anorontsanga, like Mônga, consists of two towns, one near the sea, where the Europeans, Hindoos, Arabs, Mozambiques, etc., live; and the other half a mile distant from the coast to the north, situated on a hill, planted with mangoes, cashew-nut trees, etc. The view from this hill is very beautiful: in front lies a bay proceeding from the Mozambique Channel; the sea shore is lined with an abundance of cocoa-nut trees; and the country around, which is mountainous, is well wooded, the graceful bamboo, so abundant on the eastern side of the island, waving its head amid the vegetation. As it is only recently that the people have returned from Ankaramy, the whole place is yet more or less in a state of dilapidation. The ruins of houses blown down or fired by the French are still standing, heaps of rubbish and fallen walls are everywhere visible, and it will be some time before the place is restored to anything like order.

After our work was completed at Anorontsanga, we hired a boat, with the help of the governor, from a Hindoo trader, for

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\* See ANNUAL No. III., p. 23; *Reprint*, p. 279.



eighteen dollars, to take us to Mojanga. We set sail therefore one fine hot morning about nine o'clock with a fair breeze, and that evening reached Nòsy Làva. An Arab is the Queen's representative here, and he sent word that he would come to receive us by and by, but must first go to evening prayers. After a short time, he came and made through an interpreter the usual formal enquiries after Rànavàlomanjàka, etc., and conducted us to a small but clean hut made of dried palm-leaves (the leaves of the *Satrambe*), and containing no other furniture than a couch. By and by a meal was brought me, of which the coffee was truly excellent. I was then asked if I needed water to drink, to which I replied in the affirmative. "Scented?" said the man? "Yes," I replied, for I had already been told that the water on the island was most insipid, besides I was curious to know what the scented water was like. Being very thirsty, I took a copious draught of it, but after I ceased drinking, I felt certain that the beverage I had partaken of was not only scented with, but mixed with, paraffin oil. After spending a comfortable night here, we left early next morning; but as there was little wind, we scarcely made any headway that day.

Nosy Lava is an island composed of a light-coloured sandstone in numerous step-like horizontal beds. The village at which we stopped consists of perhaps 100 houses stretching in a double row along the edge of the semicircular bay. The inhabitants are mostly Sakalava belonging to Iànona; but there are also a good many Arabs, who trade in rice, etc. There are one or two other villages on the island besides that at which we called, but how many and how large I do not know.

The next night we anchored near the shore and slept on the boat, but the rolling was so heavy as to make us all sick and ill. The night following we spent at a small Sakalava village of from eight to ten houses, named Ambòlobòzo, some distance to the north of Majàmba Bay. Here I had a delicacy in the shape of oysters. On the north-west coast there are two species of oyster, one called by the Sakalava *Sàja*, which may be seen covering the rocks in great abundance on the sea shore at low water.\* It is a small oyster, but excellent in quality. Another, known by the Sakalava as *Mandròmbò* or *Téfaka*, is only found below water at some depth. It is a much larger oyster than the *Sàja*, with the interior of the shell beautifully pearly. Whether connoisseurs would pronounce it excellent I cannot say, but to my taste it was delicious.

The rock on the sea shore at Ambolobozo is a light-coloured

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\* It is also found on the East coast.

limestone, full of fossils; in some parts it is inclined to be crystalline. Here and there it is worn into very sharp edges and points, rendering it dangerous to walk on, a character which is very common in the rocks of N.W. Madagascar. Some parts of it again resemble walls of ruined masonry. It is also somewhat cavernous. In one place in the low cliff accessible to the sea, a tunnel has been worn into the limestone about twelve feet high, but so narrow as to permit one to enter it only with difficulty. Not knowing what size the cavern might be, I lit my lantern and entered it; however, my exploration was no sooner commenced than ended, for I found the passage to be not more than 30 or 40 feet long. Large detached blocks of the limestone were lying by the edge of the sea, in which were numerous small hollows containing pools of sea water, the homes of small fish, crabs, etc.

We hoped to reach Mojangà the next day, for with a good breeze the journey from Anorontsanga to Mojangà may be accomplished in a couple of days, but the wind suddenly failing us in the evening, we were obliged to heave to and remain another night in the rolling boat, getting what snatches of sleep we could. They were, however, truly 'snatches,' for no sooner had we relapsed into self-oblivion, than a sudden lurch roused us to the fear that the boat had upset. Early on the following morning, however, we entered Mojangà, where we had a most hearty and kindly reception from the governor, Ramàmbazàfy, 14 Honours, and the people. A bath, some food, and a sleep, soon restored us to comparative comfort, except that everything seemed to be reeling, as though in a gentle and prolonged earthquake.

Mojangà was altered somewhat by the French during their occupation of the town. A jetty from 80 to 100 yards long, and 5 to 6 yards wide, for unloading ships, now exists in the harbour; many of the fine mango trees, though by no means all, were cut down, and almost all the Hova houses destroyed, including the one in which Mr. Pickersgill resided.

After remaining a week at Mojangà, we resumed our journey, with our faces homewards. We first of all visited Betsàko, a village of 60 or 80 houses, about six or seven hours' ride to the east (or north-east?) of Mojangà. The mango trees here were the largest and finest I ever saw. They were laden with fruit, so that all of us ate to our heart's content. The fruit actually reached down to the ground, so that one of my men truly remarked that one could eat it off the tree, not only sitting, but even lying on one's back.

We next visited Ambòhitròmbikèly, south-east of Mojangà.

The Hoya camp was stationed here during the recent war. The town, which, during the war, contained perhaps 500 houses, is now almost deserted; there is, however, a sufficient population left to justify the existence of a governor.

The country to the east of Mojangà for a great distance consists of limestone, in many parts fossiliferous. The strata are almost horizontal and of great thickness, and are in many parts covered with water during the rainy season. These limestone strata end abruptly a few miles to the south-east of Ambohitrombikely, forming a declivity, which may be seen running away to the east. The sea has formerly doubtless reached up to this declivity, but has now retreated, owing to the deposit of detritus by the River Betsiboka. The vegetation in this part of the country consists, for the most part, of the *Vakdana* tree (a *Pandanus*) and the two fan-palms, *Sàtramira* and *Satrambe*, which in fact occupy a vast area in the north-west of the Island. While speaking of the vegetation, I may say that the flora of the north-west coast (and doubtless of the west coast generally) is quite distinct from that of the east coast, and both from that of the interior of Madagascar. A few forms, as the *Filao*, *Longózy*, *Vha*, the Traveller's-tree, etc., are common to both the east and west sides of the Island; while some score or so of plants that occur in the north-west are not only found in the east, but also in the interior. The great bulk of the flora, however, is peculiar to the west coast.

Leaving Ambohitrombikely, we next stayed at Mèvaràno; where the mosquitoes were unspeakably unbearable. My men managed to make for themselves mosquito curtains by hanging up their *làmba* in such a way as to allow the sides and ends to reach the ground, thus effectually keeping the insects out.

Our next resting-place was Miadàna, and the day following we arrived at Màrovoay. This is a town of probably 300 or 400 houses. The country round about for many miles is composed of alluvial soil which has been deposited by the Betsiboka, which a little below here enters the sea. The stumps of *Afiàfy* trees (probably a species of mangrove), which are only found on the sea-shore, may still be seen several miles inland at the foot of a low range of hills, where also there is an old anchor. Some time ago an old cannon was also found about the same locality, and the people think there must formerly have been a shipwreck, which indeed is probable.

Leaving Marovoay we crossed the Betsiboka and arrived at Mahàbo, where the *Màngoràno* (a variety of mango) were extremely abundant and exceedingly delicious. We next followed the west bank of the Betsiboka for some distance, then

travelled by canoe for a few miles, seeing innumerable crocodiles, and slept at a village not far from Bèsèva. Then we proceeded to Beseva and Ambèrobè, at which latter place the heat (140° F. in the sun) was most intolerable. The country from Marovoay to Amberobe consists of sandstone and shale, the latter containing numerous fossils, especially Belemnites. At Amberobe we saw the head of a wild-boar which had just been killed. The people here say that there are three kinds of wild boar, the *Lambo*, *Lambosio*, and *Lamboromba*.

We next made for Antongodrahoja, calling at Trabòny, Ankoala, Ambalanjanakòmby, etc., on the way. At Antongodrahoja there are the remnants of several large volcanic craters. Two of these form the rude figure of a 3; a third, on the western (or north-western?) side of the hill on which the village stands, has probably been about three miles in diameter. In some parts of the basalt which form the rim of the crater, numerous and beautiful potato-stones, which are hollow and lined with sparkling quartz crystals, occur.

We went from Antongodrahoja to Amparihibè, where we found the River Betsiboka had shifted its bed, for instead of flowing past the south of the town (as it did a few years ago), it now passes a mile or so to the east.

After leaving Amparihibè, we proceeded to Mèvatanàna. As the country to the south of this town is often infested by robber bands, people travelling in that direction collect here and start every Monday in a great company for mutual protection. There were about 300 of us therefore when we left Mevatanana. We passed through the infested district without seeing anything more than a rude grave and traces of the blood of a man who a few days before had been foully murdered. A week after leaving Mevatanana we reached Antananarivo all safe and well, having been away about three months and a half.

R. BARON (ED.).

Subjoined is a list of words, not found in the Dictionary, most of which I collected on the journey.

Àlampàtana, Antsih.	A species of snake.
Àlantsàvoka, Betsim.	Same as <i>kirihitràla</i> (brushwood, undergrowth).
Alòvo, Sak.	A species of sea-fish.
Àmbariaka, S.	" " " " " " " "
Ambàriray, Btm.	The raised floor of a house.
Ampàndro, S.	A species of sea-fish.
Ampàtrana	On high ground.

Andevonkôtrika, A.	A species of wild-fowl.
Andôny, S.	" " " " sea-fish.
Angera, Btm.	" " " "
Anjamanga, Betsileo	"Black" lead.
Ankla, S.	A large edible cockle.
Ankôadavitra, Tandrona	Either a species of millipede or <i>Zephronia</i> .
Antafa, S.	A species of sea-fish. Same as <i>Zômpôna</i> , B.
Antendo, S.	"Dates" (same as <i>tëndy</i> ).
Antendy, S.	Same as <i>an tanty</i> .
An-têty, S.	A fresh-water fish; east coast.
Antrôva or Tsiantrôva, Btm.	A species of sea-fish.
Antsêraka, S.	Nodules of iron pyrites having a radiated structure; also species of <i>Belemnites</i> , both of which are used by the Sakalava as rifle balls.
Balahara, S.	The same as <i>Balahara</i> , above.
Balanjirika, S.	A species of sea-fish.
Bankôra, S.	" " " "
Besisika, S.	A kind of partridge. Same as <i>Traotrao</i> (Prov.).
Bêtratra, Btm.	Mud.
Bêtro, S.	A species of sea-fish.
Bika, S.	A light-coloured snake.
Bôdofôtsy, Imerina	A joke, a jest.
Borlaka, A.	A sea-fish.
Botrandra, Btm.	A kind of bird.
Danga, Bts.	A small marine animal found on the sea shore. (Not a fish, as in Dictionary.)
Dingadlingana, S.	A species of sea-fish.
Dinta, S.	A large dark-coloured heron.
Dongôrovoanana, I.	A white kind of bird. Perhaps the same as <i>Vôrompôtsy</i> (the white egret).
Fanango, Btm.	A species of ant-lion as yet unknown to science. <i>Palpares</i> sp.
Fanëntambato, W. I.	A species of sea-fish.
Flaminty, Btm.	" " " "
Fibéza, S.	A kind of bird.
Fihôhoka, Bts.	A kind of sandpiper. Same as <i>Fandiafasika</i> .
Fisaodranofôtsy, Bts.	Stays.
Fitily, I.	Same as <i>fôfon' aina</i> .
Fôfok' aina, T.	A kind of bird.
Fôlotsipay, I (?).	A tree. <i>Barringtonia speciosa</i> , Forst.
Fonaingo, Btm.	Same as <i>fôfom bady</i> .
Fôtabé, Btm.	Same as <i>Gasy</i> (from Engl. 'gas-light') below.
Fôto-bady, Bts.	Paraffin oil (from Engl. 'gas').
Gasilaitra, N.W. coast.	A crow. Same as <i>Goaika</i> .
Gasy, N.W. coast.	A species of fish. Perhaps the same as <i>Katrakana</i> , A.
Goaka, A.	
Hakâtrana, A.	
Halâmpom-bôninâhitra, I (?).	
Hâzofôdy, I.	A plant, probably introduced.
Hêrotra, S.	A species of sea-fish.
Himby, S.	The 'Remora' or sucking-fish. <i>Echeneis remora</i> .
Hitikîtika, Btm.	A cane or rush frame for catching fish with.

, Btm.	The octopus (not the cuttle-fish, as in Dictio-
, Bts.	A species of sea-fish. [nary).
3ts.	The south of the hearth.
T.	A mother.
3tm.	A lamp.
.	A fresh-water fish ; east coast.
bo, Btm.	A man.
I.	A species of cricket.
ana, A.	A species of fish. Perhaps the same as <i>Ha-</i>
A.	Intestinal worms. [ <i>kàtrana</i> , A.
àmba, S.	A species of sea-fish.
ana, Btm.	A kind of bird.
1, S.	A species of sea-fish.
S.	The fan-tailed warbler. Same as <i>Tsintsina</i> .
/	A pebble.
, I.	A water-bird. [ <i>lirioides</i> , Baker.
1, I.	A tough fibrous plant. <i>Xerophyta dasy-</i>
, S.	Same as <i>Ankia</i> , above.
ròmba, S.	A species of wild-boar.
sio, S.	" " " " "
antsòro, I.	A large caterpillar.
ty, Btm.	A species of sea-fish.
sakasira, S.	The sea.
1, A.	Twopence. [comes dear.
ndri-bàry, I.	To lay in a stock of rice for sale when it be-
ka vâry, A.	Same as <i>mivily vâry</i> (to thresh corn).
na, Bts.	Same as <i>mankatràtra</i> .
gatra, Btm.	To bewitch.
gy. T.	A woman.
sona, Bts.	To smell anything.
òmbò, S.	A large edible oyster.
àbo, S.	The fruit of the <i>Rofia</i> palm.
day, S.	Morning.
òra, S.	A father.
a, T.	The sun ( the <i>o</i> like <i>o</i> in 'note').
òatòaka, Btm.	A fresh-water fish ; east coast.
so, S.	Same as <i>mahàrikivy</i> (bitter).
ka, I.	Bent, awry. Same as <i>màbiririoka</i> (to whiz).
ibòky, I.	
1, S.	To play.
, Btm.	To sing.
okòmana, A.	A species of wild-fowl.
zo, S.	A tree, probably an acacia.
tàntana, I.	To be level.
òrika, I.	To run, as molten lead.
ika. I.	
òà, S.	A species of sea-fish.
a, S.	A father.
ndro, S.	A species of sea-fish.
aka, S.	" " " " (not <i>Pilafika</i> , as in Dic-
S.	A species of sea-fish. [tionary).
tsy, S.	A thorny tree.
y, S.	A father.
àna, Bts.	A kind of soft reddish rock used for colouring dishes.

Ratàna, Btm.	A species of snake.
Ròndro, S.	The sky (as well as 'a cloud').
Sahàza, S.	Same as <i>vòky</i> (full, satisfied).
Sàja, S.	A kind of edible oyster found abundantly on rocks on the sea shore.
Saklvy, I.	The larva of a beetle (a kind of <i>Vbangtry</i> )
Salàmovàlo, Bts.	A kind of bird.
Sampla, S.	A species of sea-fish.
Sànabàvy, I.	An imprecation.
Sànadáhy, I.	" "
Sanéndry, S.	An imported aromatic vegetable substance.
Saròy, Btm.	A fresh-water fish; east coast.
Sàtrambe, S.	A species of fan-palm. <i>Hyphaene sp.</i>
Sohihy, Bts.	" " " wild-duck. Same as <i>Tsiriry</i> .
Sòngotàny, I.	A projecting headland; also a small island in rice-fields, etc.
Soritra, A.	A species of lark. Same as <i>Sorôhitra</i> .
Sosòy, S.	" " " sea-fish.
Tabòro, S.	A kind of tree.
Tahòboka, Bts. and Btm.	A cooking-pot.
Tamàna, S.	Fat, plump. Same as <i>matàvy</i> .
Tambòho, Btm.	Same as <i>tanèty</i> (downs, open country)
Tatàrosònisony, Bts.	A kind of bird.
Tàvina, Btm.	Same as <i>fàly</i> (?). " <i>Mitàvina ny vòalavo</i> ."
Téfaka, S.	" " " <i>Mandrímbo</i> , above.
Tòkitòky, S.	A kind of sea-shell.
Tonàndro, A.	A species of lemur.
Tòngo, T.	" "
Tratrao, S.	A kind of "sea-fish."
Tsàkatsàkangily, S.	The teeth.
Tsakòko, Btm.	A kind of bird.
Tsaròro, Btm.	A species of cuttle-fish.
Tslandlandòmboky, S.	" " " sea-fish.
Tsibòlobòlo, S.	A kind of caterpillar.
Tsilàmodàmoka, A.	A cat-like animal.
Tsiantròva, Btm.	A species of sea-fish. Same as <i>Antròva</i> .
Tsingàlamainty, I.	" " " minute black water beetle.
Tsingàlavádika, I.	" " " water-boatman. (All the <i>Tsin-gála</i> appear to be water-beetles.)
Tsingaotràtra, Btm.	An insect found on sugar-cane.
Tsìlotsloka, Btm.	A species of sea fish.
Tsivòngo, A.	The male <i>Aròsy</i> (a wild-duck).
Valàladrisa, I.	A grasshopper.
Vàlohàra, S.	A kind of limpet.
Vànjahilatra, T.	Blacklead.
Vànovàno, Btm.	A small eel found abundantly in the sand at the outlets of lagoons.
Vàtonòmby, W. I.	Quartz pebbles containing tourmaline.
Vàzandàhy, Bts.	Same as <i>Bolòky</i> (a black parrot).
Vàzimbàzina, I.	" "
Vóantsànjy, S.	A species of sea-crab.
Vòlonjòro, A.	Same as <i>Vironjozòro</i> (a species of warbler).
Vònitra, S.	Dew.
Vóronkòntsy, Btm.	The white egret. Same as <i>Vòrompòtsy</i> .

R.B.

## STUDIES IN THE MALAGASY LANGUAGE:

## NO. V.—THE COMPOUND VERBAL PREFIXES.

IN my article "On the Inflection of the Verb in Malagasy," in No. IV. of this magazine, I tried to show that the causative and reciprocal prefixes in Malagasy (*mampan*, *mampàha*, *mampi*, *mampiha*, *mifan*) are compounds, formed in a very simple and systematic manner by a combination of the corresponding simple ones (*man*, *mi*, *maha*, *miha*), placing a new prefix before the verbal noun of the verb formed by the simple one (e.g. *mamèly*, to beat; *mi-famèly*, to beat one another), only subjecting this juxtaposition to the general laws of euphony; e.g. *manao*, to do; *fanao*, manner of doing; *mam-panao* (for *man-fanao*, which would be an impossible combination in Malagasy), to cause one to do a thing. And I have up to this time seen no reason for changing my opinion.

But a writer in the last number of this ANNUAL (No. X. p. 255), briefly reviewing a little French pamphlet by Père Jean, says that if this author is right in considering the Malagasy causative prefix *mampi* to be derived from the Malay *memper*, "the theory of Mr. Dahle would of course fall to the ground." He has, however, himself some doubt as to the correctness of this derivation, chiefly because it seems to him that the causative sense in Malay is produced less by the prefix *memper*, than by the affix *kan* generally coupled with it.

The suspicion intimated is certainly reasonable enough; for, as a rule, the causative sense in Malay clings to the affix *kan*, and does not at all depend on the *per* (= *ber*) in *memper*. In Malay the causatives can be formed in two ways, viz.—(1) By the prefix *men* (= Malagasy *man*) and the affix *kan*. (2) By the prefix *memper* (i.e. *men-ber*) and the affix *kan* (applied at the same time). It is only quite exceptionally that *memper* alone renders a verb causative.\*

If we now compare with this the compound prefixes (as I consider them) in Malagasy which I have enumerated above, we shall have to make the following remarks:—

(a) All the Malagasy verbs in *mampi* have a causative sense; whereas the Malay verbs commencing in *memper*, as a rule, only get a causative sense when the affix *kan* is added.

(b) In Malagasy the only manner of forming a causative verb is to make it commence in *mamp* (*mampi*, *mampan*, etc.); whereas in Malay the causative verbs are more frequently formed without the syllable *per* (in *memper*), and only by the affix *kan* and the prefix *men*. This proves that the syllable *per* in Malay is generally of no importance whatever for the causative sense, while the *p* (*pi*, *pan*, etc.) in Malagasy is essential to it.

(c) If the Malagasy *mampi* is to be "derived" from the Malay *memper*, what then has become of the final *r*? This letter may in these languages

\* See L'Abbé P. Favre's *Grammaire de la Langue Malaise*. Vienne: 1876; p. 117-126.



easily pass into *l* or *d* and even into *s* (Malagasy *sato*, Malay *ratu*), but does not often fall out altogether where it really belongs to the root.

(*d*) Provided that *mampi* could be explained as suggested by Père Jean, what then about *mampan*, *mampaha*, *mampiha*, and *mifan*, which are evidently all of them formed by analogous rules? Any one who undertakes to explain one of these from a Malayan source must try to account for the others too, as they must undoubtedly all go together.

I venture to think that these observations, brief as they are, will prove sufficient to show that Père Jean's "derivation" on this point at least is a case of "*lucus a non lucendo*." And if this is the strongest blow my theory is to be exposed to, I see no reason to feel nervous about it.

It was, again, not to be expected that a compound prefix could be proved to be "derived" from another language, for such forms seldom are so obtained. The simple prefixes may be (and often are) essentially the same, but the manner of combining them is often characteristic of each individual language; and it was not to be expected that it would be otherwise in Malagasy, which is certainly one of the finest and best developed languages in the family to which it belongs.

But although each language may have its own peculiar way of combining the simple prefixes, it may be anticipated that there would be some analogy in this respect between languages of the same family. And so there is. So far, a reference to the Malay *memp* does not only not overturn my theory, but is a very strong argument in its favour. For what is the Malay *memp*? Nothing but a *compound prefix*. Just as *mam-pan*—on my theory—is composed of *man-man*, and *mam-pi* of *man-mi* (through the mediums of verbal nouns in *fan*, *fi*, corresponding respectively to the verbs in *man* and *mi*), so is the Malay *memp* composed of the two prefixes *men* and *ber*, both of which may be used alone to form a verb, the first one generally in a more transitive, the second one in a more intransitive sense, corresponding nearly to *man* and *mi* in Malagasy; e.g. *ber-pukul*, to beat; but *memukul*, if an object is added. When *mem* and *ber* are combined in Malay, the affix *kan* is generally added at the same time; and this then makes the verb causative; e.g. *ber-anak*, to have children, *mem-per-anak-kan*, to cause to have children. The peculiarity of Malagasy as compared with Malay is, that the combination of the two prefixes is effected by means of the verbal noun of the verb formed by the first one of the two as pointed out above); and that this combination of the prefixes is in itself sufficient to render the verb causative, without any additional affix as is required in Malay.

It may perhaps be said that my "verbal noun," as an intermediate link, is, at the best, only a hypothesis. This I admit, but it is a hypothesis which explains the facts consistently with the euphonic laws of the language. Besides this, there are a good many facts which go far towards proving that this hypothesis is the true explanation of the matter in hand. I may mention the following:—

1. The conception expressed by these verbs (causative and reciprocal) is certainly a compound one, and it is therefore only natural that the form of the verb should also be compound.

2. In the cognate languages compound conceptions (compound actions

and states) are generally expressed by compound prefixes (as we have already seen to be the case in Malay). It was then to be expected that such should also be the case in Malagasy.

3. If *mampan* is not=*man+man*, or *mampi* not=*man+mi*, etc., how is it that the first form invariably forms the causative of verbs whose simple prefix is *man* (e.g. *mandèha*, *màmpandèha*); and the second one, as invariably, the causative of those whose simple prefix is *mi* (e.g. *mijàly*, *màmpijàly*), and never *vice versa*?

4. But if it must be admitted that these prefixes are compounds, then the only way of explaining their form in Malagasy is to consider the verbal noun (of the forms *fanao*, *fandèha*, *fijàly*) the intermediate connecting link. *Man-mijaly*, for instance, could never become *mam-pijaly* but through the verbal noun *fijaly*; but *man-fijaly* naturally becomes *mampijaly*.

5. This procedure is also a very simple and logical one. The verbal noun is simply treated as a new secondary root, and the new prefix placed before it simply adds its own force to that of the prefix of the primary verb from which the verbal noun has been formed (e.g. *mijaly*, to suffer; *fijaly*, suffering; *mampijaly*, for *man-fijaly*, to cause suffering); no other changes taking place than such euphonic modifications as always must occur when a prefix terminating in a consonant is to be joined to a root beginning with a consonant that does not agree (euphonicallly) with it.\*

The meaning of these prefixes becomes very simple and clear on my theory, the whole being governed by the following rules:—

a. Active (transitive) prefixes may be combined with active ones, or in other words, reduplicated, as in *mampan* for *man-man*. In this case the verb generally becomes doubly active, i.e. can be construed with two objects.

b. An active prefix may be placed before a neuter (intransitive) one. This will, as a rule, give us a causative verb, but one that cannot take a double object.

c. A neuter prefix before an active one (*mi-fan* for *mi-man*) gives the verb the sense of reciprocity, i.e. the subject is both acting and acted upon; e.g. *mifamily*, to beat one another (*mamily*, to beat). In this case the prefix *mi* seems to have almost a passive sense, a sense which also, though seldom, is found in the simple verbs in *mi*; e.g. *misàsa* is 'being washed'.

d. If the active prefix (*man*) in the simple verb has a neuter sense, or if the neuter prefix (*mi*) has an active sense, which is exceptionally the case, this will appear also in the compound forms of them; e.g. *mampively* can take a double object (against the rule b), because *mively* is transitive, notwithstanding its neuter prefix. On the contrary, *mampandèha* would

\* A Malagasy scholar may object, that although *mampi* is euphonicallly correct, we should rather have expected *mamijaly*, as roots with *f* or *v* or *p* for their initial letter generally drop it after such a prefix and change the *n* to *m*. This is true; but we have still traces of an older practice in such verbs as *mambòly*, *mambòatra* (for *mamololy*, *mamoatra*), and this analogy has been followed in the compound prefixes. In ordinary compounds, *n-f* always becomes *m-p*; e.g. *òlom-pidina* for *òlona fidina*.

take only a single object (against the rule *a*), because *mandeha* is intransitive, notwithstanding its active prefix.

*e.* Two neuter prefixes are never joined without an active one between them; as in *mifampirisa*. The reason is, upon my theory, self-evident. We can easily see the force of combining two active prefixes, or one active with one passive (neuter), in order to show that there are two agents, of whom the one acts on the other to make him act or suffer (or both at the same time, as in the reciprocal forms) what the verbal root expresses. But it is scarcely conceivable what two neuter prefixes (*mifi=mi-mi*) could express, as they could not influence one another; the double form could hardly add any other sense to that of the simple one than that of repetition or continued action. But this is in Malagasy expressed by reduplication of the root. If we therefore had a form *mifivézy*, it would, I presume, have had the same meaning as *mivézy* (to ramble), which is actually in use.

But all these rules may be comprised in a single one, namely: *Any additional verbal prefix to be supplied is placed before the verbal noun of the simpler verb, and adds its own peculiar force to that of the prefix (or prefixes) of the verb from which this verbal noun has been formed.*

For a fuller explanation of the inflection of the Malagasy verb in general, I must refer the reader to my former articles in the *ANNUAL*, to the earlier ones of which I might, however, have a good deal to add, if I could rewrite them now. The present article is only written in corroboration of my theory of the formation of what I consider "compound verbal prefixes."

L. DAHLE.



#### NO. VI.—THE GENITIVE CASE OF NOUNS.

THE genitive case of nouns in Malagasy is expressed in the following ways:—

1. By adding an *n* (or *n'*) to the preceding noun; e.g. *andevon' olona*, people's slaves; or *ny andevon' olona*, the slaves of people; or *ny andevon' ny olona*, the slaves of the people (*andevon*, slave or slaves, and *olona* people; *ny* is the article). This is the genitive properly so called.

2. By simple juxtaposition of the two words. This generally takes place when the relation of the two words is that of a genitive of identity (e.g., *ny tany Palestina*, the land of Palestine; *ny tondrombôhitra Oliva*, the mountain called Olivet), or of materials (e.g. *trano vato*, a house made of stone; *fitra lamba*, a separating partition made of cloth).

3. By joining the two words into one, with or without a hyphen; e.g. *heviteny*, or *hevi-teny*, exegesis (*hevitra*, meaning, and *teny*, words, the meaning of words).

4. By verbal nouns. The noun, which we should call a *genitivus objectivus*, is simply added to the verbal noun as object in the accusative; e.g. *fitiavana ny mpanjaka*, love of the king.

These are the principal means of expressing the genitive in Malagasy. But as I only intend to treat of the first, which is at any rate *the genitive*

*proper*, I have not aimed at exhaustiveness in other respects, and therefore have not paid any regard to the exceptions to, or modifications of, these rules that may take place in special cases. As the modification marking the genitive does not affect the word which is put in the genitive, but the preceding one, which governs it, it is evident that even the words in the first of the above modes are, to all appearance, not a true genitive, but a *status constructus*, just as in Hebrew. But what is this *n* (or *n'*) or *status constructus* in Malagasy? and how did it originate? To give an answer to this question is the object of the present article.

In the earlier Malagasy books we generally find *-ny* for the present form *-n'*, except in cases where the following letter was a vowel; for here an apostrophe was often put for the final *y*, instead of this *ny*, to avoid a *hiatus*. The earliest Malagasy grammarians (as Mr. Freeman and Mr. Griffiths) explained this *ny* to be the suffix of the third person (sing. and plur.). The phrase *vòlan' olona*, people's money, is by Mr. Griffiths written *volany ny olona*, and explained as "money of them, the people." This explanation was considered doubtful, but the practice was for a long time generally followed in all books issued by the Protestant Societies here. Sometimes, however, the *ny* was left out entirely, when the following noun had the article (*ny*), so as to avoid a double *ny*.

It was, I believe, Rev. W. E. Cousins who, in his Grammar\* first suggested that the better practice might be to write *-n'*, so as to avoid the possibility of any confusion with the personal suffix;† but he did not attempt to explain the etymology of this *-n'*. The practice he suggested was certainly an improvement, as it agreed better with the pronunciation in the spoken language and helped us to avoid ambiguity. It was therefore readily accepted and has since then been followed pretty uniformly in all the publications of the English and Norwegian Presses.

In the Malagasy publications issued from the Press of the French Roman Catholic Mission here the practice has, until quite lately, been to leave out this *-ny* (*-n'*) before the article of the following noun; to write it in full before a proper noun (as this has no article *ny*); to combine it with the consonant of the following noun, if that begins with a consonant and has no article (in which case both nouns are joined by means of a hyphen); and, finally, to join it with an apostrophe to the following noun, if this was an appellative without an article. A similar practice was also followed in the very first publications of the L.M.S. Press.

Père Causèsque, in his *Grammaire Malgache* (Antananarivo: 1886), says that this practice was accepted by Père Webber from the first publications of the L.M.S.; and he contends that it ought to be given up. He would not, however, accept the *-n'* uniformly, but thinks that we ought to write *-n* in all "mots croissants" and *-n'* in all "mots décroissants." By the first term he understands words that simply add *-n* in the genitive; by the last, words that drop their final syllable (or part of it) in the genitive (i.e. in *status constructus* before a genitive). He would

\* *A Concise Introduction to the Study of the Malagasy Language as spoken in Imérina*. Antananarivo: 1873.

† See the foot-note on p. 44 of his Grammar.

therefore persuade us to write *trànon olona* (*trano*, house), but *làlan' olona* (*lâlana*, way, road), as *lâlana* has here dropped the final *a* and therefore should have the apostrophe, whereas *trano* has not dropped any vowel, and should consequently not have the apostrophe. He lays so much stress on this point that he devotes about twenty pages of his *Appendix* to it, although he does not in any way even attempt to explain this *-n* or *-n'*.

This position seems at first sight reasonable enough, but is nevertheless wrong, even upon his own very sound principle, that an apostrophe should be put where an elision has taken place, and nowhere else; for what he really does in the examples given (and they are his own) is, to *omit* the apostrophe where a whole syllable has been dropped, and to *put* it in where, upon his own theory, nothing has been left out. This I shall now proceed to prove. But let me remark at the outset, that in so doing I do not wish to depreciate his Grammar, which is in many respects a useful book; but as it has been suggested that we should modify our practice and make it agree with his views on this point, against this I feel bound to stand out as against an error.

Père Causseque leaves out the apostrophe where an entire syllable has been dropped, for he writes *lâlan'* for *lâla(na)n'*. Now what is left out here? Of course the termination *na* in *lâlana*, but as this termination precedes the *nota genitivi* (*n'*), which, according to him, ought not to have any apostrophe, he should, upon his own principle, have written *lâla'n*. The cause of his error is, that he has considered the *n'* in *lâlan'* as the remnant of the termination *na*, whereas it really is the *nota genitivi* (*n'*) joined to the root *lâla*, the loose termination *na* being dropped, as it always is, before any additional syllable.

Père Causseque may say that I must prove that the *na* is really thrown off here. To this I reply: That no one who knows anything of Malagasy at all will deny that the antepenults terminating in *na* invariably drop the *na* before any additional syllable; and that if any one makes a single case the exception to this general rule, the *onus probandi* certainly rests with him and not with those who simply abide by the general rule. If any further proof is wanted, we have it in the manner in which the personal suffixes are joined to the nouns. These suffixes are, of course, virtually the genitive of the personal pronouns. If, therefore, the *n* of the termination *na* is kept before the genitive of the nouns, we should naturally expect it to be kept before all forms of the suffixes where the laws of euphony would allow it. We should consequently, on this supposition, expect to find *lalanko*, which would have been perfectly right, as a mere matter of euphony, but, as every one knows, it becomes *lalako*. The *n* appears only in such suffixes as have an *n* of their own, and is in such cases equally found after words not terminating in *na*; e.g. *trano-nao* as well as *lala-nao*. We see that *lalana* is, before all suffixes, treated as if it had been *lala*, the *na* being simply dropped, and no regard paid to it. Why should it be otherwise in the genitive of the nouns? But as the *nota genitivi* of nouns (*n'*) and the first consonant of most of the suffixes happen to be the same as the last consonant of *lalana* (*n*), the combination of the two parts is somewhat obscured;

and it is so far explainable how people have been led into the error that the *n'* in *lalan'* is only a remnant of the termination *na*. But the suffix of the first person sing. (*ko*), which has no *n* of its own, is the real test of the points in question. For if the *n* in *lalan'* had been the remnant of the termination *na*, we see no reason why it should have been dropped before *ko* (as *nk* is perfectly admissible in Malagasy); but if, on the other hand, it is the *nota genitivi n'* (joined to *lala*), it is self-evident that it must be left out, as *ko* is itself the genitive and takes its place.

Père Causseque has also himself felt that the form *lalako* is incompatible with his theory. He says: "Seule la combinaison *lalako* fait difficulté pour l'analyse;" but he has a very easy way of disposing of the difficulty, adding: "C'est une exception" !\* If a theory fails in the only instance in which it can be brought to a decisive test, it utterly breaks down. He adds that this exception does not matter much ("Peu importe," *l.c.*), as "six cases out of seven must be sufficient to establish the rule;" but unfortunately the other six cases (*lalanao*, *lalan'y*, *lalanay*, *lalantsika*, *lalanareo*, *lalan' izareo*) all rest on a misunderstanding. What he tries to make out is, that the *n* in all these cases is a remnant of the *na* in *lalana*, as this is a "mot décroissant." But this view breaks down entirely from the fact that words which are, upon his own theory, not "mots décroissants" and have no *n* of their own (do not terminate in *na*), get exactly the same forms; e.g. *trano* (house): *tranoNAY*, *tranoNY*, etc., just as with *lalana*. Consequently the *n* in these suffixes cannot be the remnant of the termination *na* of the noun in question.

To sum up: *lalana* is treated exactly as *trano* throughout, only that *na* is dropped before all these suffixes, just as it is before the *nota genitivi (n')* of the nouns; or, in other words: *lalana* is, both before the suffixes and before the *n'* of the genitive, treated as if its form had been *lala* (which is indeed the root). I may add, that Père Causseque, on his own theory, ought to have written *lalan'nao*, *lalan'ny*, etc.; for if *trano*, which does not terminate in *na*, nevertheless gets an *n*, and *lalana* also keeps its terminative *n*, it ought to have two (*n' n*). That words terminating in *ka* and *tra* have somewhat deviating forms does not concern us here, as they generally do not take any *n'* in the genitive at all, and consequently do not bear upon the question we are discussing.

These remarks are, I think, sufficient to prove that the *n'* in *lalan'* and the *n'* in *tranon'* are in no respect different from one another. If one of them should be written with the apostrophe, the other should also be so written.

But, it may be said, why write any of them with an apostrophe? Père Causseque contends that an apostrophe should not be used if there is no elision of a vowel; and I think he is right. He adds that it has not yet been proved that this *n (n')* in Malagasy is an abbreviation of a fuller form terminating in a vowel, or, in other words, that we here have an elision of a vowel that calls for an apostrophe. Here he is right again. It has not yet been proved. In fact, scarcely any attempt has been made to explain the etymology of this *n'*, nor does he himself make any

\* *Grammaire Malgache; Appendix*, p. 29.

attempt to do so. The earlier Malagasy grammarians considered it to be the suffix of the third person (*ny*) and wrote it accordingly (*-ny*), as already mentioned. As this was the original mode of writing it, and *-n'* the later one, this latter was considered an abbreviation of *-ny*. Hence the apostrophe. But this of course does not amount to a *proof* that it ought to be written with an apostrophe, it only explains the origin of the present usage.

But how is this usage to be proved to be correct, or the reverse? As the Malagasy language has no history of its own for any length of time, we have to turn to the cognate languages for an explanation of its corrupted and obscure forms. What then is the *nota genitivi* in the cognate languages?

1.—*Malayan Family*. The genitive is in these languages often expressed simply by juxtaposition, but often also by placing a separate word between the two nouns. In Malay proper this word is *na*; e.g. *anak-na rāda*, the child of the king. This *na* has by many been thought to be the pronominal suffix of the 3rd person (sing. and pl.), which at any rate has the same form. And as this suffix *na* is evidently the Malagasy *ny*, it has been concluded that Malagasy *n'* or *ny* (in gen.) must also be the pronominal suffix *ny*, as mentioned above. As I was familiar with this peculiar manner of expressing the genitive (3rd pers. suffix) in the Syriac, I was once inclined to think that this was the right solution.\* But as I find that this *na* (sometimes dwindled into *n*, as in Malagasy) is used to express the genitive even in those Malayan dialects where the suffix for the 3rd person is quite different (e.g. the Dayak suffix 3rd pers. sing. and pl. is *e*, but the *nota genitivi* is *n*), I feel convinced that it is a separate word, although both this *na* (or *n*) and the suffix *na*, *ni* may originally have sprung from the same root (probably the one from which both *iny* and the article *ny* in Malagasy originated).†

2.—In *Polynesian* languages the genitive is generally expressed by the insertion of the so-called "particles of relation" *na*, *no*, which often dwindle into *a*, *o*, the *n* being dropped. (N.B. The frequent elision of consonants is characteristic of the Polynesian languages.) This *na* or *no* is of course the very same word as the *na*, *ni* (*n*, *n'*) spoken of above. And here it can *not* be the pronominal suffix, as there is no such suffix in the Polynesian languages.

3.—*Melanesian Family*. As far as I can make out from Gabelentz and Codrington (almost our only authorities for Melanesian), the genitive is formed in the following ways:—

(a) By simple juxtaposition of the two nouns; sometimes with a slight modification of the final vowel of the first one (*a* becoming *e*). (b) By means of a pronominal suffix; some cases are given by Codrington, but are perhaps doubtful. (c) Most frequently—at any rate in the more developed languages—by a separate word, inserted between the two nouns. This "particle of relation" is sometimes *ono* or *no*, (*na*, *ni*, seldom), but by far most frequently *ni*; by elision of *n* it sometimes here, as in Polynesian, becomes *i*, *e*, or *o*. This *ni* is by these two scholars

\* See my passing remark on this in ANNUAL NO. VIII. p. 77.

† Cf. my remarks on these words, *l.c.* p. 75–77.

considered as a preposition, governing the genitive; which is no doubt the right view of it. It is so common in the form *ni*, that in Codrington's list\* of prepositions governing the genitive it occurs as the *nota genitivi* in ten Melanesian languages, whereas *na* occurs only in three (and in one of those only as a collateral form to *ni*), *ne* in one, and the abbreviated form (*i, e, o*) in four (in one collateral to *ni*). *Ono*, according to Gabelentz, occurs in Maré, collateral to *o*.

After this I do not think we need hesitate to consider the Malagasy *nota genitivi* (*n, n'*) an abbreviation of an original preposition (*ni, na, no*) governing the genitive case. And as its vowel has been lost by elision (just as its consonant has been lost by elision in other dialects, as pointed out above), we have good etymological grounds for writing it with the apostrophe (*n'*), which is our present practice.

I should not, however, consider it *necessary* on that score to do so. The *n* alone would be quite sufficient for all cases. We do not generally mark etymological elisions by an apostrophe. When we write a word like the English 'subtle,' we all know it is the Latin *subtilis*, but we do not think it necessary to mark the elision of the vowel by an apostrophe. And so in many similar cases.

L. DAHLE.

#### NO. VII.—THE PREPOSITION AMY (AMINY?).

IN Article vii., § 1 of the Appendix to his *Grammaire Malgache* (Antananarivo: 1886), Père Causseque tries to prove that there exists no preposition *amy* in Malagasy, as the word in question, he says, really is *aminy*, and not *amy*, as the "école Anglaise" has made it. His proofs are the two following:—

(1) We frequently hear the form *aminy* in the colloquial language before words which are quite indefinite, and consequently it cannot be right to resolve it into *amy ny*, as the sense would not in such cases require the definite article (*ny*).

(2) As we can say *amin'* before nouns beginning in a vowel (e.g. *amin' alahelo*) the word must be *aminy* and belong to the same category as the "mots croissants" (i.e. words terminating in *na*), just as if it had been *amina*. He sums up the case by saying that "logic and sense" alike are in favour of his view, and that *amy* is "a barbarism in no case to be tolerated."

A faithful pupil of his—at least his pupil in this point—recently wrote an article in Malagasy (in the *Madagascar Times*) expatiating on the same view; but as neither that writer, nor the Malagasy who wrote an article against him in the same newspaper, advanced any new argument in the case, I shall not pay any regard to them here.

As to the two arguments stated above, I will only remark:—

1.—That the first one only proves that a Malagasy would use the definite article in cases where a Frenchman or an Englishman would

\* *Melanesian Languages*; Oxford: 1885; p. 150—151.



not use it, and could not see the force of it, a fact we have met with over and over again during our Revision of the Malagasy Bible. See, for instance, the use of the article with nouns that have the possessive (suffix) added, e.g. *ny tòm-poko*, where no modern European language would use it. But this is of course nothing at all strange, as scarcely any two languages in the world use the definite article in exactly the same manner. Consequently this argument is really no argument at all.

2.—That the second is not only no argument in favour of this theory but the very strongest argument against it, as I shall prove presently. Here I will only hint at my view by adding that if *aminy* had been the word in question, we should have to write *aminin' olona*, for *amin' olona* would have been simply an impossibility. Consequently this argument is a good deal worse than none at all.

After having thus answered the alleged arguments in favour of *aminy*, I shall proceed to show what arguments positively prove that *amy*, and not *aminy*, is the word in question.

1.—The accent (*aminy*). If we except words in which the final syllable *ny* is simply the suffix 3rd person (as *fàrany*, *tàhiny*, *an-kèriny*, *ivèlany*), we shall scarcely be able to point out a single antepenult in Malagasy terminating in *ny*. They are all penults (*vahiny*, *fahiny*, *ankèhitriny*, etc.). It is quite different with words in *na* (e.g. *lalana*), which are generally antepenults. Still, I should not consider this alone a decisive proof; *aminy* might be an exception to the general rule.

2.—But quite decisive is the manner in which this word combines with suffixes and nouns governed by it. All the words terminating in *ny*, and in which this *ny* is not the suffix *ny*, invariably keep this *ny* before suffixes and nouns alike.

(a) *With suffixes*. In order to show this, I shall choose the two suffixes of the 1st and 3rd persons singular, although the others would do equally well. Examples: *tàny*, land, *taniko*, my land, *taniny*, his land (not *tako*, *tany*); *tsiny*, blame, *tsiniko*, *tsininy* (not *tsiko*, *tsiny*); *vinàny*, guess, *vinaniko*, *vinaniny* (not *vinako*, *vinany*); and so on, without exception. If any one supposes that it might be different with prepositions, we will try two prepositions terminating in *ny*. *Ambóny*, above; *amboniko*, above me; *amboniny*, above him (not *amboko*, *ambony*). *Ambàny*, under; *ambaniko*, under me; *ambaniny*, under him (not *ambako*, *ambany*). Now nothing can be more evident than that *aminy* would on this analogy have to become *aminiko*, *amininy*. But as it invariably is *amiko* and *aminy*, this proves that the word is *amy*, not *aminy*.

(b) *With nouns*. Here we invariably have: *tanin' olona* (not *tan' olona*); *vinanin' olona* (not *vinan' olona*); *ambonin' olona* (not *ambon' olona*), and so on. The termination *ny* is invariably kept before the *nota genitivi* (*n'*). Consequently, if the word in question had been *aminy*, we should have to write *aminin' olona*. But—as we all admit—every one (natives and Europeans) both says and writes *amin' olona*, the word in question must be *amy*, and not *aminy*. Why Père Caussègue has failed to see this is, I suppose, chiefly because he has been misled by his peculiar theory about the genitives of “mots décroissants” in *na* (amongst which he, wrongly, classes his *aminy*), a theory which

rely rests on a misunderstanding, as I have endeavoured to prove in preceding article. The reason why *amy* and other prepositions in agasy can be construed with a following genitive, just like a noun in' *olona*, like *tanin' olona*), will be clear in the following section.

—If we look to the cognate languages, we find the preposition *amy* considerable variety of forms (*mai* [in Polynesian], *mi*, *me*, *ma*, *mo*, [composed of *i-mi*]) in Polynesian and Melanesian, but no trace of lengthened form like *aminy*. That these *mi*, *me*, etc., are identical with the Malagasy *amy*, no scholar can doubt for a moment, as the words so similar, the meaning and use are the same, and these languages are to have such a number of like words in common. Besides this *mi*, Melanesian also has another preposition, *ana* or *an*, with very much same meaning. This is of course the Malagasy *an*, which always combines more closely with the following word, a combination which Malagasy is usually marked with a hyphen (*an-tanàty*, *an-làny*, *an-itra*, *am-po*, etc.).

Mr. Codrington, who, in his *Melanesian Languages*, has examined these positions more thoroughly and minutely than any other author I am acquainted with, contends that *mi* was originally a noun, and says that it fell in use as a noun in some of the Melanesian dialects. Now let us suppose the same to be the case with the Malagasy *amy*. This supposition would explain:

1) *Its form* (*Amy*, not *my*). If the original *mi* (*my*) was a noun, we easily conceive that a true preposition would be added to it to make a prepositional phrase. Now we have precisely such a preposition (*a*) in Malagasy, which is joined to nouns to make a prepositional phrase (e.g. *Anôsy*, *Amôrony*, *Afàra* [provincial for *aoriana*, and quite common in *akinankaratra*]). A collateral form to this *a* is *i* (e.g. *Ivôhony*, *Ivélany*, *ina*; they always say of soldiers who run away on the road: "*Mivêlilalana izy*"). In Melanesian both *a* and *i* are used as separate prepositions. In Malagasy it has become customary to join them to the following word in writing; but this difference is of course of no importance as to the etymology and meaning of the words; it is only a different orthography. In Melanesian *a* and *i* are quite common prepositions; in Malagasy they occur only exceptionally, in the manner mentioned. They may, however (like *an*), be found as formative elements of secondary roots; but this has not yet been investigated.

2) *Its construction*. We have already seen that *amy* is construed with nouns and genitives exactly as a noun, and that before nouns in the dative it takes the *nota genitivi* (*n'*) just as a noun (e.g. *amin' olona*, *tranon' olona*). This is only explainable on the supposition that *amy* is a noun governed by the preposition *a* (*amy*=*a-my* or, with a genitive, *amin'*=*a-min'*). Supposing now that the meaning of the noun (*mi*) was that of the 'whereabouts' of something (which seems to be the meaning in Melanesian), a phrase like *amin' ny trano* (as it ought to be written) would mean 'at the whereabouts of the house,' i.e. at, in, towards, or from the house. *Amy* is wide enough to cover all this, and the etymological explanation given would also account for its wideness and indefiniteness.

Other Malagasy prepositions can be explained in the same manner, especially the pair *ambany* and *ambony* (below and above). They are evidently compounds (not, however, with *a*, but with *an*), and they are construed exactly in the same manner as *amy* (as seen by the examples I have given). *Ambany* no doubt points back to a noun *vany*, the under side of a thing, although such a noun is not to be found in Malagasy now.\* In the cognate languages it might perhaps be found. *Ambony*, in the same manner, points back to a noun *vony*, the top of a thing. This we have in Malagasy only in the sense of a 'flower' (the top of the plant?). *An-vany* and *an-vony* would, by virtue of the euphonic laws of the language, necessarily become *ambany* and *ambony*. If this is the true explanation of these prepositions—which it certainly is—we ought to write *amin'*, *ambanin'*, *ambonin'* (and so also with all the prepositions that can take a suffix), uniformly before all nouns, with or without an article, only with such modifications before consonants as the euphonic laws would require (e.g. *amim-pifaliana* or *amin' pifaliana*).

Considering, as I do, these prepositions to be nouns, I ought perhaps to add that the idea of a noun (in a very indefinite way, or of a verb) seems to lurk underneath almost everywhere in Malagasy, as it does in all the Oceanic groups of languages. *Aisa* ? (where ?) seems to us to be as clearly an adverb as any word in the language. Still, when we say: "*Aisan' Iläfy Namèhana* ?" ("In what direction from Iläfy is Namehana ?") and reply: "*Any andrèfany*" ("To the west of it"), we have clearly treated *aiza* as a noun with following genitive. And when we come to examine it, we find it is composed of *a-isa* ? (at what ? for *isa* is used even of things—as well as of persons—when they are defined) and the phrase would mean: "At what of (what side of) Iläfy is Namehana ?" And if we carried the analysis further, I believe we should find that *isa* itself was composed of the pre-formative *i* and the noun *sa* = *sàvatra*. (In the language of Lo on Torres Islands—*sa* or *ja* means 'a thing,' just as does the Malagasy *zavatra*.) Even the Malagasy interjection *hay* ! (really !) is in Melanesian shown to be at least a pronoun ('what ?') and is most likely ultimately a noun. In other words: the 'parts of speech' flow into one another in a remarkable manner in these languages, as I intimated in another article in this magazine nine years ago (ANNUAL IV., p. 77, 78).

I have long been of opinion that these prepositions are to be regarded as nouns, but I have not found time to discuss the subject. But as a discussion has been recently raised with regard to *amy*, and my reading of Dr. Codrington's work furnished me at the same time both with new materials and gave me a new impulse to re-examine the question, I thought I had better explain my views briefly, as I have tried to do in the present article. But although I had to be brief, I could not entirely abstain from entering into the *etymology* of *amy*. Words are living personalities, with a history of their own, and it will never do to look at them as if they had emanated from Babel yesterday.

L. DAHLE.

\* Perhaps it exists in *vany*, the part between the knuckles, and between the knots of sugar-cane, bamboo, etc.—ED.

## MANTASOA AND ITS WORKSHOPS:

A PAGE IN THE HISTORY OF INDUSTRIAL PROGRESS IN  
MADAGASCAR.

ON one of the closing days of the year 1878 the Church of St. Joseph, on the edge of the plain of Imàhamàsina, west of Antananarivo, was the scene of a funeral service, celebrated with the accustomed ritual of the Roman Church. Bishop Testell-Cornish and other non-members of that Church were present at the service, to do honour to the memory of a man who indeed deserves to be distinguished in the history of Madagascar, M. Jean Baptist Laborde, Consul of France, who had spent 47 of the 73 years of his life in this country, and was for the greater part of that time employed in the service of the Malagasy Court. When the ceremonies in church were completed, the body was borne along the grand high road which he himself had constructed, some 20 miles E.S.E. of the Capital, to Mantasoa, the scene of the chief labours of his life-time. Here it rests in a small enclosure containing a substantial tomb of stone surmounted by a pillar and shaded by a clump of loquat trees. A French traveller\* has justly remarked that either the man nor his work have received from English writers on Madagascar the notice they deserve. For the main facts in this paper the writer is indebted to a small Malagasy periodical formerly published by the Jesuit mission†, lent him by the courtesy of the Rev. P. Caussègue, S.J. Notices in French literature there probably are, but, so far as the writer knows, no account has appeared in English, except a passing notice of M. Laborde's death in this ANNUAL No. IV. p. 123; *Reprint*, p. 536.

About the year 1831, a ship was wrecked somewhere near Matinana, on the S.E. coast of Madagascar. Among the passengers was M. Laborde, who had made the voyage from India to secure the salvage of a wreck at Juan de Nova. He was accompanied by an African boy, who was his faithful servant through the rest of his life, and is still living at Mantasoa, honoured by the natives with the title of 'Ingàhy Mainty' ('Sir Black'), and enjoying nothing better than to be interviewed on the subject of his beloved master and all that he did. M. Laborde is said to have been instrumental in saving the lives of his fellow passengers by swimming on shore with a rope. Having

\* See *Trois Mois de Séjour à Madagascar*, by Captain Dupré. † *Règata* vol. for 1879.

made his way some 100 miles north to Mahèla, he was there received by a fellow countryman named Delastelle, who was in the employ of Ránavàlona I., the reigning sovereign. Brought by Delastelle to the Capital, it soon appeared that he had talents which might be turned to account, though indeed a marvellous readiness to turn his brain and his hand to anything seems, rather than any special knowledge, to have been the secret of his success. He first commenced casting guns north of Ilàfy, some six miles north of the Capital, but, difficulties arising from the scarcity of water and of fuel, he was directed by the Queen to choose a more suitable site for future operations, and he at length chose Mantasoa. The forest was then near at hand for procuring fuel, and water was obtained by making two large reservoirs, which, as one sees them now, set like sapphires in the surrounding hills, seem almost to deserve the name of lakes. From the higher one, called Rànofitolòha, or 'The Water from Seven springs', there is a descent to the second, and thence the water is carried by aqueducts, cut in places through solid rock, to the site of the workshops. "I cannot describe," M. Laborde used to say, "the trouble I had in making these pools, and the banks round them, and the great aqueduct;" and indeed one cannot visit the spot without marvelling at what the genius and industry of one man has achieved, with only what may be called unskilled labour to carry out his plans.

Hands indeed were not wanting. It is said that the Queen assigned him nearly 2000 men; and for them with their wives and children he built a town, of which the ruins may still be seen scattered over the hill-sides. It is well known that unpaid labour for the Government or for superiors is the rule in Madagascar, *fànompàna* or government service taking the place of taxes. Wherever subjects are sent, there they must go; and what they are bidden to do, they must do. The rules of the service at Mantasoa were so strict that it has become a proverb to describe any hard service: "*Ràharàhan' Imantasoa: mandèha tsy mièra, màty lôso; mandèha mièra, màty vènty*"; that is, "It's a Mantasoa business: if you go away without leave, you are fined a florin; if you get leave to go, you are fined eight-pence." M. Laborde, however, was of a generous disposition and often divided amongst the work-people money given him by the Queen for himself. One of the traits which his old servant speaks of, was his unfailing generosity and unbounded hospitality; no day passed without his giving to those who asked, and no guest came whom he did not welcome to his house.

M. Laborde's invention was unbounded, and his ingenuity in the application of means to an end was not easily beaten.

Whatever the Queen required he either made or attempted to make, and seldom indeed was the attempt unsuccessful. He got books from France and studied them by night, that he might know how to proceed in the various operations of which he had no previous knowledge. I remember standing on the hill-side with a native, who pointed out the uses of the various workshops which lay in ruins before us. "There," he said, "cannon were made, there guns, there glass, and there swords." The little monthly magazine already referred to gives an astounding list of the things manufactured between the years 1831 and 1857: guns, powder, cannon and shot, brass, steel, swords, glass, silk, lime, black paint made from bones, blue and red paint, ink, white soap, potash, lump-sugar, sugar-candy, bricks and tiles, and lightning conductors. Add to these the various breeds of animals brought from abroad: draught oxen, antelopes (called by my old friend Ingahy Mainty, *antilompy*), merino sheep, and others. Add again the fruits of the earth: vanilla, arrowroot, apple-trees and vines, from which a quantity of wine was made. Add again the royal gardens and the unfinished palace at Imahàzoarivo, the aqueduct which formerly brought water (from a hill near Isoàvina) into the palace in the Capital, and the famous road mentioned above, along the greater part of which a carriage might be driven—no small praise for a road in Madagascar!

As the cannon were finished they were sent off to various forts in the interior or on the coast; the first one finished, however, was placed in town. It was called Mamônjisôa ('Saviour of good'), and on the day of its completion the Queen is said to have given M. Laborde 15,000 dollars, the whole of which he distributed amongst the work-people before the day was over. The Queen raised him to the highest rank of the nobles (the Zanak' Andriamàsinavàlona), and wished also to make him an officer of the Fifteenth Honour (then the highest military rank), which favour, however, he declined.

But "all work and no play" was not the character of Manta-soa. The French writer referred to above says: "It was the Versailles and the Marly of Madagascar." You may see on the river bank the house which M. Laborde built for Prince Radama, and, in the town, the Rôva or sacred enclosure, which was also the occasional abode of royalty. Here there were dances and amusements of various kinds, "*fêtes improvisées par l'imagination féconde de M. Laborde*," who seems to have been as successful in improvising sports as in more serious occupations. He was apparently of a very genial disposition and loved by all alike. A Malagasy friend recalls the time when he was a

young man and disposed to hold himself aloof from the commoner sort, and how M. Laborde would give him a gentle dig in the ribs and admonish him, "*Manaova izay ataon' olona*," that is, "Do as other people do." (Those who know Malagasy will perhaps fancy they see a twinkle of the eye accompanying the use of the active imperative.) He was a special favourite of Queen Ràsohèrina. He had attended her as doctor when she was a child and often carried her on his back within the precincts of the palace, and he accompanied her on her last journey to the coast in search of health in 1867.

When the ports of Madagascar were closed (1845—1853), and all intercourse with foreigners forbidden, M. Laborde seems to have been for some years the only European left in the Island, but he at length had to fall before the dread of foreign interference. For some complicity (whether real or only supposed\*) in the design to set Rakòton-dRadàma on the throne in the place of Ranavalona I., he was banished in 1857, and remained at Bourbon until the Island was again opened up in 1861. It does not clearly appear whether the work at Mantasoa was continued through that period or not, but soon after his return the final cessation came. King Radama II., it is said, acted with too great precipitation in carrying out his wish to abate forced labour; word was given at Mantasoa that those who choose to go to their own homes might do so, and, with a unanimity scarcely wonderful, all thereupon departed. First came desertion, then decay; and it is a sufficient indication of the love of the Malagasy for firewood, when it is near at hand, that, while walls of brick and walls of stone, and aqueduct and columns and furnaces may still be seen at Mantasoa in abundance, no house, except those of the sovereign, of M. Laborde, and of the few present inhabitants, has a vestige of a roof left; and of the timber, brought by labour of men and oxen to such an extent that it has perceptibly made the line of forest to recede four or five miles, one gigantic axle of a waterwheel is the solitary remnant. For the remaining years of his life M. Laborde seems to have lived chiefly in the Capital, acting as Consul of France, and attending the services of that Church of which he was a devoted member.

Those whose pleasant lot it has been to spend a few holiday hours at Mantasoa—and to the present writer no spot has pleasanter memories—must have been struck by the extraordinary ability of the one man who created it all. To plan works

\* There can be little doubt that M. Laborde *had* a good deal to do with the Lambert plot here alluded to; see Madame Pfeiffer's *Lust Travels*; Oliver's *Madagascar*, vol. i. pp. 78-86; and other books.—ED.

of such extent and so various in kind, to marshal such an army of workmen and teach them their different parts, to see that orders were carried out and things really completed: all this needed a man of no common powers. It is sad that such a work should have been stopped; sad to walk along the deserted causeways and through the ruined workshops, and to be reminded in a small degree of the giant cities of the Eastern empires of old time—the memorials of a civilization that was, and that might still have been.

Let us briefly describe the scene with these mingled feelings of admiration and regret in our minds. Let us take our stand inside the enclosure, where formerly royalty came to be entertained. Just below us, on the left, is the tomb of M. Laborde, and beyond that, in the distance, is his house, a large low bungalow built of magnificently joined timber, of which the roof alone shews any signs of decay. It is surrounded by a glorious grove of *Zahana* trees (*Phyllarthron Bojerianum*, DC.), dark glossy evergreen, spangled with pink blossoms in the spring-time. Away there on the left runs the high road to Mahandro, much frequented when Tamatave was shut up in the days of the late war, but now almost deserted. The beautiful reservoirs mentioned above are behind us, and before us, as we look to the south-east, the river runs, now gliding far like gentle Avon, and now broken into dashing falls. A little wood clothes the opposite bank, rising steeply to a tiny village with picturesque cottages and tombs. On this side is the house of Prince Radama, and there, stretching along westward in front of us, in a meadow on the river bank, we see the workshops standing in a long line; one mighty one some 180 feet in length by 36 in breadth, and four others half that size. To the right again is a large furnace and forge, which bears the royal insignia of Madagascar (a crown and 'R.M.') and the date 1841. If we descend we shall find that each of these shops contained wheels worked by the water from the lakes above. The twin octagonal columns of solid granite, graceful enough for a village church, still stand in the rear of each of the houses, but the troughs which carried the water across them have all disappeared. Entering one of the houses, and pushing our way through overgrowing brambles, we mount a flight of stone steps and see the enormous size of the wheel indicated by the curve of the stone-work below us; and there are the side channels which worked other smaller wheels; and there, beyond, is the tunnel by which the water, its work done, passed away to the river. Seldom perhaps could one witness such skilful and laborious application of slight means to a great end, and more



seldom, one would trust, shall we see the fruits of ingenuity and industry so soon falling into decay. The place has changed indeed since those busy days in the forties when it teemed with life.

There was an attempt made to change its name from Mantasoa ('Destitute of good') to Sòatsimànampiovàna ('Good that knows no change'); but alas! history has not justified the latter appellation. It is only the glory of the hills that remains unchanged, and the river, gently flowing by now as then. *Labitur et labetur!*

A. M. HEWLETT.

*Note.*—I venture to add a few words to Mr. Hewlett's paper, since my acquaintance with Mantasoa dates back a few years earlier than that of my friend, when the place was not quite such a ruin as it is now. During most of the years of the decade 1870—80 it was frequently seen by many of the European community of the Capital, on our way to and from the country house belonging to Dr. Davidson on the edge of the upper forest at Andrangolòaka, three or four miles beyond Mantasoa, and where many of us, by Dr. Davidson's kindness, spent several pleasant holiday times in the hot seasons. Mantasoa was often made a place for a day's picnic from Andrangolòaka; and in the early part of 1872, when I first saw it, the workshops were much more perfect than they are now. The largest one, which Mr. Hewlett speaks of, was then crowned by a high-pitched roof, covered with tiles. The walls of this building were (and are) of dressed stone-work, massive as that of a castle, and about six feet in thickness. In this building, the furnaces and cannon-casting apparatus were still existing; and in the four smaller workshops more of the waterwheel machinery was then remaining than is now the case; and, if I am not mistaken, there were iron aqueducts, carried by the octagonal stone pillars, leading the water into each workshop. The forge, of beautifully dressed stone, had then its roofs nearly perfect, surrounding the openings to the furnaces; and there were two kilns, also of well-finished masonry, for firing the pottery manufactured at Mantasoa.

One other point may be mentioned in connection with this remarkable creation of M. Laborde's skill, but of a less pleasing character than many of those described by Mr. Hewlett, viz., that during the long persecution between the years 1836—1861, many of the Malagasy Christians had to work as a punishment at these great buildings. For several years some of them had to labour in quarrying the stone and building these massive workshops. I have been told by the pastor of one of the country churches formerly under my charge, that they had no rest either on Sundays or on other days, and that their bondage was very severe, many of them dying under its pressure. So that the accession of Radama II. was welcomed, by them especially, as a time of "liberty to the captives, and the opening of the prison to those that were bound."—JAMES SIBREE, JR. (ED.)

## CURIOSITIES OF WORDS CONNECTED WITH ROYALTY AND CHIEFTAINSHIP

### AMONG THE HOVA AND OTHER MALAGASY TRIBES.

It is a fact well known to all philologists that in several groups of language there are found classes of words which are only used by people when speaking of their sovereigns or chiefs, with regard to their persons, their actions, and their surroundings, as well as to the honours paid to them both when they are living and after their death. These special words are in some countries used not only in matters relating to the sovereign and the chiefs, but also in those referring to the members of their families. In certain languages (e.g. in those of some of the Pacific groups) such special words are found applying not only to a few members, or parts of the body, etc., of the chiefs, but they occur in such a large number as to form a distinct dialect, or kind of 'court language,' used by the higher classes, or by others of lower rank when speaking to them. Further elaboration of this specialized speech is found in some islands where no less than three distinct dialects occur: one used by, or in speaking to, the king or principal chief; another, in use by, or in matters relating to, the secondary chiefs; and a third employed by the rest of the people.

These peculiarities of speech are found, I believe, more or less developed over the whole Malayo-Polynesian family of languages, and they accordingly make their appearance also in Malagasy, as a member of that great stock of human speech. In Madagascar, however, they have never been developed to the extent just described as found in some of the Pacific islands; but for a long time past it has been known that even in Imèrina there are a number of such specialized words which are employed with regard to the sovereign, and these have probably been in use for centuries as applied to the chiefs of the central province. It will be seen that these are not words which are not employed with regard to ordinary persons or things or actions, but are almost all of them commonly used words which have gained a special and different meaning when applied to the sovereign.

The more noticeable of these words are connected with the illness, decease, and burial ceremonies of a Malagasy sovereign, although there are also two or three which are applied to the living king or queen. Perhaps, however, these are more of the nature of honorific titles than strictly coming within the class of words we are here discussing.) Thus: the old word for a sovereign is *Ampingàra-bôlamèna*, literally, 'golden throne,' the first part of the phrase being taken from the Portuguese *vingarda*, so that this term is not of more ancient origin than about three centuries ago, or, at most, three centuries and a half. Another term applied to the sovereign is *Fahiray*, 'first,' a word which is not used with regard to things generally, although it is formed strictly according to the rule for making ordinal from cardinal numbers (e.g. *fidharàa*, second,

from *rôa*, two; *fâhatêlo*, third, from *têlo*, three), the word *vôalôhany* (*vôa*, fruit, *lôha*, head) being always used for 'first.'\* A term sometimes applied to the Queen by elderly officers in public speeches seems to our notions somewhat impertinently familiar, viz. *Ikâlâtôkana*; in ordinary talk by the people this means 'our only lass,' and the word *ikala* is often applied also to hens. If one might venture on such a free translation, it seems to mean (*not* 'cock of the walk,' but) 'hen of the roosting-place.' It is, however, very like, in its free familiarity, the use of the word *lalôhy* ('you fellow') to the former kings by some of their most privileged councillors. The members of the royal family are termed *Atinandriana* (lit. 'the liver,' or 'inside,' of the sovereign or chief).

Returning, however, to the more exact illustrations of the subject, a Malagasy king or queen is not said to be 'ill' (*maràry*), but 'rather warm' (*mafâanafâna*). And they do not 'die' (*màty*), but are said to 'retire,' or 'to turn the back' (*miambôho*). In parts of Madagascar distant from Imerina, the word *fôlaka* (bent, broken, weakened) is employed in speaking of a deceased chief. (With regard to people generally, among the Tanàla and other tribes, the phrase, *fôla-mânta* (*mânta*, raw) is used for sudden death; *folaka an-dantony* [*lantony*, the fore-arm?], for dying young; while *trano folaka* is the house [*trano*] where a corpse lies in state.) Then the dead body of a sovereign is not termed a 'corpse' (*fâtý*), but 'the sacred thing' (*ny mäsina†*). The late Queen Rânavalôna II., who died in 1883, is always spoken of as *Ny Masina* in the government Gazette and in proclamations, as well as by the people generally in ordinary conversation. There is among the Hova, as well as among the other Malagasy tribes, a deep sense of "the divinity that doth hedge a king;" and until the acceptance of Christianity by the late Queen and her Government, the Hova sovereigns were termed 'the visible God' (*Andriamânitra hita mäsö*); other terms of similar import were also applied to them. In accordance also with this same belief, upon the stone structure covering the chamber formed of slabs of naked rock, where the royal corpse is deposited, a small timber-framed building is erected, which is called the 'sacred house' (*trano masina*). This is in appearance exactly like the old style of native house, made of timber framing, with walls of thick upright planking, and high-pitched roof covered with wooden shingles. This distinction of having a timber house built upon the stone tomb is also shared by the higher ranks of nobles, who, it should be remembered, are descended from ancient kings in Imerina.

When the corpse of a sovereign is lying in state, the women in their various divisions or tribes are expected to come in relays to mourn; but this ceremonial mourning is not called by its usual name (*misaona*), but

\* A curious word for chiefs and their wives is used by the Bâra, Sâkâlava and some other Malagasy tribes, viz., *ôôdy*, which in Imerina usually means 'animal,' 'beast,' or, as an adjective, 'sensual,' 'brutal;' although it is also used here of children as well, probably much in the same way as words of an unpleasant (and even nasty) meaning are often applied to children and infants from fear of some envious and malign influence, such as the 'evil eye.' Perhaps, however, it is really a word of entirely different origin, from the Swahili *ôôdy*, my lady, my mistress.

† *Masina*, however, except in very modern Malagasy, does not mean 'holy,' but, consecrated, set apart, established, confirmed.

the people are said to 'present' or 'offer, tears' (*miñti-drànomàso*). Then again, a sovereign is not said to be 'buried' (*alvina*), but is 'hidden' (*afnina*); and the massive silver coffin made of plates, in which most of the Hova kings or queens in more recent times have been buried, is called the 'silver canoe' (*lakam-bôla*), a word in which a little bit of history is doubtless preserved: a remembrance of a former period when the Hova were not, as they are now, an inland people, but a coast-dwelling or an island tribe, and buried their dead in old canoes, as is still the custom with the Sakalava,\* the Bétsimisaraka, and other Malagasy peoples living on the coast.†

When the royal corpse has been deposited in its last resting-place, and the stonework at the entrance to the tomb is being closed up again, this act is called 'stopping up the sun' (*tàmpi-màsoandro*); the sovereign being 'the sun,' the light and warmth of his people, and was formerly often so termed in public speeches. Much the same idea appears in the phrase used by some of the coast tribes in speaking of the decease of their chiefs, viz., 'the king is reclining,' or, 'leaning on one side' (*mihilana ny ampanjaka*). This same word is used in Imerina to denote the afternoon, the 'decline of the day' (*mihilana ny andro*). A very bold and poetical figure is also employed to express the general mourning at the decease of a sovereign, *Mihôhoka ny idny aman-danitra*, i.e. 'Heaven and earth are turned upside down!' This is not the place to describe in detail the many and curious ceremonies, as well as the numerous things prohibited to be done, at the decease of a Malagasy king or queen; suffice it to say that, with very few exceptions, every one's head had to be shaved; no hat could be worn or umbrella carried; the *lamba* only (no European dress) could be worn, and this had to be bound under the armpits, leaving the shoulders uncovered; all singing, dancing, or playing of musical instruments was prohibited, as well as the practice of many handicrafts, as spinning, weaving, making of pottery, gold and silver work, etc.‡ Of course some occupations could not be altogether abandoned, such as the tilling of the soil, sowing and planting rice, etc.; but such work was not called by the usual terms, but was mentioned as *mildtsaka an-tsaha*, i.e. 'going into the country,' or, 'settling down in the fields.' So also, the usual word for 'market' (*tsina*) was not employed during the time of public mourning, but these great concourses of people were called simply 'meetings,' or, 'places of resort' (*fihonana*).§ In speaking of the death of relatives of the sovereign, they are not said to be dead, but 'absent,' or, 'missing' (*diso*). The same figurative phrase as is used by ourselves in speaking of friends or relatives who are dead as 'departed,' is also employed by the Malagasy, who say their friends

\* See ANNUAL VIII., 1884, p. 67.

† A somewhat similar historical fragment lies under the word used for the water used in the circumcision ceremonies: it is termed *rano masina*, 'salt water,' and in the case of children who are heirs to the throne, it must actually be fetched from the sea (*ranomasina*). Doubtless sea-water was formerly used in all such cases while the Hova were still a shore-dwelling tribe.

‡ See a very full account of the funeral ceremonies at the death of Radama I. in Tyerman and Bennet's *Voyages and Travels round the World*; 2nd ed., pp. 281-286.

§ They are also called *tsena mialahelo*, 'sorrowful markets.'

are *lâsa*, 'gone;' they also speak of them as *lâtsaka*, i.e. 'fallen' or 'laid;' while the surviving members of a family of which some are dead are spoken of as 'not up to the right number' (*latsak' isa*)\*. With regard to the ordinary people also, their dead relatives are said to be 'lost' (*very*), and 'finished' or 'done' (*vita*).

Although not strictly included in the present subject, it may here be noticed that the same use of euphemistic expressions as those just mentioned with regard to death, is also seen in those used by the Malagasy in speaking of things they have a great dread of, especially small-pox, which, before the introduction of vaccination, often made fearful ravages in Imerina, as it still occasionally does among the coast tribes. This terrible disease is called *bélémbé*, i.e. 'greatly deserted,' no doubt from the condition of the villages where it had appeared. It is also called *lavira*, an imperative or optative formed from the adjective *lavitra*, 'far off,' and thus meaning, 'be far away!' or, 'avaunt!' A feeling of delicacy causes other euphemisms, such as the phrase *didtam-pôitra*, literally, 'cutting the navel,' instead of *fôra* and other terms denoting the circumcision ceremonies.

The use of some special words as applied to certain classes of royal servants or attendants may here be noticed; although possibly these also are not, speaking exactly, of the class of euphemistic expressions like the majority of those described above. Thus, the royal cooks are termed 'the clean-handed ones' (*madio tânana*); describing, no doubt, what they *should* be, even if they occasionally are not exactly what their name implies. Then, some companies of royal guards a few years ago were termed the 'sharp ones' (*marânitra*; cf. Eng. 'sharpshooters'?). The government couriers in the provinces are called *kéli-lohàlika*, lit. 'little-kneed;' while a class of palace servants in constant attendance on the sovereign, and from whom the queen's messengers are chosen, are the *tsimandô* or *tsimandao*, i.e. 'never forsaking,' because some of them are always in attendance day and night upon the sovereign. The queen's representatives at distant places are called *mâsoivôho*, i.e. 'eyes behind;' but this word is also now used in the more general sense of 'an agent' of other persons besides the sovereign.

The illustrations already given are numerous enough to shew that the use of special words, or of common words in a special sense, as applied to matters relating to royalty, is a distinct feature in the Hova dialect of Malagasy. Some little time ago, in talking to a class of my students about this peculiarity of their language, I happened to remark upon it as one which Malagasy had in common with many of the Malayo-Polynesian languages, but said that it seemed to be far less developed in Madagascar than in many of the Pacific groups. Hereupon one of the young men, Rajaonary, a student from North Betsilèo, told me that such special words, as applied to the chiefs, were a very marked feature in the speech of the Betsileo people, and that, in fact, there were a much larger number of these words employed in the southern province than

\* A very poetical expression, in which the word *latsaka* also occurs, is used in speaking of the dead, who are said to be as 'Salt fallen into water which cannot be salt again' ('*Sira lâtsaka an-dràno ka tsy himbôdy intsony*').

use among the Hova. He gave me at the same time a number of plates; and I then asked him to note down these words, which he obligingly did in a few days, writing quite a small essay on the subject. It seems to me so well worth preserving in an English dress, that I now proceed to translate it. He entitles it:

VERBAL WORDS EMPLOYED AMONG THE BETSILEO WITH REFERENCE TO THEIR CHIEFS."

Betsileo are a people who pay extraordinary respect to their chief, and from this fact everything relating to them is a thing kept apart for them, and is not allowed to be mixed up with what belongs to the mass of the people. The chiefs' houses, although there is very little difference between them and those of the people generally, are something sacred or set apart in a special manner, so that no one enters them at will, but only after having asked and obtained leave of the chief, or after being summoned by him. And again, after having entered, no one can push himself forward north of the hearth,\* or stand out, but must sit quietly and respectfully south of the hearth. In the same manner also, the things in the house are set apart, for drinking-tin, the spoons, the plates, etc., cannot be handled or put upon the lips; for if any one drinks from them, the hand must be held to the mouth, and the water then poured into it from above. The chief's drinking-tin cannot be used by any person except one who is also a chief. The stool on which a chief sits in his house must not be trodden upon, must be lifted up in passing, and cannot be sat upon by any one but the chief. And all the furniture in the house is like something sacred, must not be lightly touched when carried outside, for those who carry it are warned by the words '*an-ddpa*' ('belonging to the palace'), and they may take care of it. And not only are the things in the chief's house set apart for his own use, but also even those in the people's houses should the chief have chanced to use them; and even their own g-tins, ladles, etc., are often kept untouched by the lips, lest the chief should chance to pass by and require them, so that the Betsileo are accustomed to drink water out their hands.

Not only are *things* thus kept by the Betsileo for special use by chiefs, but many *words* are also set apart for them, both the names of certain things and other words as well. These may be divided into three classes, as follows:—

*Words specially applied to the Family of Chiefs, from their birth until they die, but while their parents are still living.* See the following:—

Betsileo	English.	Word used for the Children of Chiefs.	Meaning.
z	Children	Anakôva	Child of the Hova.†
	To eat	Misoa	Soa, in Hova, good, pleasant.
	Plate or dish	Fisoavana	Verbal noun from above.
	Farewell	Mahazôa nôno mäsina.	Lit. 'May you get a sacred nipple.'‡

\* place of honour in a Malagasy house.]

† word *Hova* seems to convey the idea of 'noble,' 'princely,' in many of the non-Hova names.]

Isa. lx. 16: "Thou shalt also suck the milk of the Gentiles, and shalt suck the breasts of the Gentiles."

Ordinary Betsileo word.	English.	Word used for the Children of Chiefs.*	Meaning.
<i>Mitéraka</i>	To bear offspring	<i>Manidina</i>	To cause to descend.
<i>Màty</i>	Dead	<i>Fólaka</i>	Bent, broken, weakened, see p. 302, ante.
<i>Fáty</i>	Corpse	<i>Vòlafólaka</i>	Broken or bent money.

"2.— Words specially applied to Elderly Chiefs, that is, those who are too old to have their father and mother still living. When that is the case, there is a considerable change made in the names given to the parts of the body, as well as in certain words describing their actions and their condition. This will be seen by the following list:—

Ordinary Betsileo word.	English.	Word used for Elderly Chiefs.	Meaning.
<i>Antitra</i>	Old	<i>Màsina</i>	Sacred, established, see p. 302.
<i>Anakandriana</i>	An adult man (lit. 'child of the chief').	<i>Hova, or ny andrian-dàhy</i>	Hova (see ante), or the prince.
<i>Andranobé</i> (wife of above)	An adult woman (lit. 'at the great house').	<i>Hova, or ny andrian-bàvy</i>	Hova, or the princess.
<i>Lôha</i>	Head	<i>Kabêso</i>	Brains (?)
<i>Mâso</i>	Eye	<i>Fanilo</i>	Torch†
<i>Sôfina</i>	Ear	<i>Fihaindana</i>	The listening (or listener)
<i>Tànana</i>	Hand	<i>Fandray</i>	The taker
<i>Tôngotra</i>	Foot	<i>Fandia</i>	The treader
<i>Nify</i>	Tooth	<i>Fanêva</i>	A flag (lit. the hoverer)
<i>Trôka</i>	Belly	<i>Fisafàna</i>	<i>Safo</i> is 'rubbing,' 'caressing.'
<i>Mihinana</i>	To eat	<i>Mifanjotra</i>	(?)
<i>Vilia</i>	Dish, plate	<i>Fifanjorona</i>	(?) Verbal noun from preceding
<i>Mipétraka</i>	To sit	<i>Miàrina</i>	To be erect (in Hova)
<i>Mandéka</i>	To go	<i>Mamindra</i>	To remove (do.)
<i>Màndry, na Maitry</i>	To lie down, to sleep	<i>Mirôtra</i>	(?)
<i>Fàrafàra</i>	Bedstead	<i>Filànana</i>	Place of desire (?)
<i>Vàdy</i>	Husband or wife	<i>Filàna</i>	A ford (in Hova)
<i>Màty</i>	Dead	<i>Véry</i>	Lost
<i>Fáty</i>	Corpse	<i>Haverizana</i>	The losing
<i>Velôma</i>	Farewell (lit. may you live)	<i>Màsina</i>	Be sacred, established, etc.
<i>Akory àngharèò?‡</i>	How are you?	<i>Manao akory ny rô-tana?</i>	How did you sleep? (see above, <i>mirotra</i> .)

[It will be seen from the above list that several of the words for the parts of the body—the eye, the ear, the hand, the foot—are simply words describing the actual office of these members, as light-giving, means of hearing, taking, treading, etc. Probably the very general practice of tabooing (making *fddy*) words which form the names or parts of the names of chiefs (which we shall notice again further on) has had influence in producing some of these specialized words.]

\* This phrase (the last one overleaf) is customary in public speaking as a mark of respect to the chief's children, when deprecating blame [as is always done in the opening sentences of a *kabàry*].

† [Cf. "The light of the body is the eye."]

‡ Sometimes this salutation of the common people is substituted by the phrase: "*Akory ny nandriangharèò?*" a phrase of the same meaning as the one addressed to the chief, only that the ordinary word *màndry* is here kept instead of the special one *mirotra*.

## "3.— Words specially applied to Chiefs, whether Old or Young.

Ordinary Betsileo word.	English.	Word used for Chiefs.	Meaning.
<i>Tráno</i>	House	<i>Làpa</i>	? Also used in Imerina.
<i>Maràry</i>	Ill, unwell	<i>Manélo</i>	To shade, to shelter.
<i>Mijàbo</i>	To nurse (the sick)	<i>Mitràmbo</i>	?
<i>Miandràvana</i>	To sing at a funeral.	<i>Mampiòtraka</i>	?*
<i>Trànovòrona</i>	Bier, lit. 'bird-house.'	<i>Trànovitana</i>	The finished house (?).
<i>Miàhy</i>	To lie in state	<i>Mampiàry</i>	To cause to go round about.†
<i>Fàsana</i>	Tomb	<i>Tranomèna</i>	Red house.†
<i>Mandévina</i>	To bury	<i>Maniritra</i>	To plunge, to dive; in Imerina the phrase <i>an-iritra</i> is used to describe the temporary burial of a corpse until the proper tomb is completed.

"The poles on which a chief's corpse is carried to burial are termed *hàsomàsina*, 'sacred wood'; and the water into which they are cast away after the funeral is called *rànodritra*, 'water of endurance' (? *àritra*, endurance, patience, etc.). When the dead from among the common people are spoken of, the words *Raivèlona* ('Living father') or *Rénivèlona* ('Living mother') are prefixed to their names; but in the case of deceased chiefs, the word *Zànahàry* (God, lit. Creator) is prefixed to their names when they are spoken of; in the same way as the word *Rabevoina* ('The one overtaken by much calamity' ?) is employed by the Hova in speaking of the departed, or simply, *Itòmpokolàhy* ('Sir,' or 'My lord'), or *Itòmpokovàvy* ('Madam,' or 'My lady').

"These then are the special words used by the Betsileo with regard to their chiefs; but what can be the reason of their giving them such extreme honour? It is this:—

"The chiefs of the Betsileo are considered as far above the common people, and are looked upon almost as if they were gods. If anything angers a chief and he curses, the people consider the words he speaks as unalterable and must surely be fulfilled; so the persons whom he may chance to curse are exceedingly afraid and in deep distress. And, on the other hand, if anything pleases him, and he thanks (lit. 'blesses') any one, then those who receive his blessing are exceedingly glad, because they suppose that that also must certainly be fulfilled. For the chiefs are supposed to have power as regards the words they utter, not, however, merely the power which a king possesses, but power like that of God; a power which works of itself on account of its inherent virtue, and not power exerted through soldiers and strong servants. Besides which, when a person is accused by another of having done evil, and he denies it, he is bidden to lick (or kiss) the back of the hand of the chief, or to measure his house,§ and to imprecate evil (on himself)

\* [In Hova *hòtraka* means 'boiling,' but perhaps there is no connection between the two words.]

† [Scarlet is the royal colour in Madagascar; at the funeral of Radama I. one of the large palaces was draped from the ridge of the roof to the ground with scarlet cloth; the sovereign alone has a large scarlet umbrella carried over her, and dresses in a scarlet *lamba* or robe.]

‡ [See Mr. Richardson's description of Betsileo funeral ceremonies; ANNUAL I. p. 71 (*Reprint*, p. 74).]

§ [Measuring the tomb of their master is, I am told, a practice followed by slaves here in Imerina as an invocation of evil on themselves if they have really done something of which they are accused.]



while doing it. In this way, so they say, it is found out whether he really has committed the offence, or not: if he did offend and yet still persists in denying it, then it is believed that the curse which he invoked when licking the hand of the chief, or when measuring his house, will return upon him; if, on the contrary, he is innocent, he will remain unharmed. In like manner also, the chief is supposed to have power which works of itself, on account of his sacred character, to convict of any secret fault. And when the chiefs die, they are supposed to really become God, and to be able to bless their subjects who are still living; and the reverence in which they are held is extreme, for when their name chances to be mentioned, the utmost respect is paid to it both before and after the utterance of it: before it, the words *Ny Zanahary* (God) must be prefixed, and after it the following words are added: "May the mouth strike on the rock, and the teeth flow with blood, for he has gone to be God"\* (the speaker's mouth and teeth being meant). And when the chief's grave is cleared of weeds and rubbish, the people dare not do that unless they have first killed oxen and made supplication with outstretched hands to the deceased.

"The belief of the Betsileo that their chiefs are so sacred and exalted as here described is therefore the reason of their setting apart so many things specially for them, whether actions or words. It must, however, be said that it is the customs of the northern Betsileo which have mostly been here noted, although probably they do not greatly differ from those in the southern part of the province."

While considering the customs connected with Malagasy royalty and chieftainship, a word or two may be here said about the practice of tabooing—or making *fady*—the words or parts of words which happen to form the names of chiefs. This appears to be prevalent all over Madagascar, and is a custom the Malagasy have in common with many of the Oceanic races with which they are so closely connected. There are no family names in Madagascar (although there *are* tribal ones, and although also, one name or part of a name is often seen in a variety of combinations among members of the same family†), and almost every personal name has some distinct meaning, being part of the living and still spoken language, either as names of things—birds, beasts, plants, trees, inanimate objects, or names describing colour, quality, etc., or words which denote actions of various kinds. (There are a few exceptions to this—a few names which embody obsolete or obscure words or forms of the verb—but they do not affect the general rule here laid down.) So that the names of the chiefs almost always contain some word which is in common use by the people. In such a case, however, the ordinary word by which such thing or action has hitherto been known must be changed for another, which henceforth takes its place in daily speech. Thus when the Princess Rabôdo became Queen in 1863, at the decease of Radama II., she took a new name, Rasohérina (or, in fuller form, Rasohérimanjaka).

\* "*Mikapoha amy ny ruto ny rava, ary mandehana ra ny nify, fa efa lasan-ko Andriamanitra izy.*"

† Thus, a friend of mine at Ambôhimanga who is called Rainizaivêlo, has four daughters named respectively Razaivêlo, Raovêlo, Ravêlonôro, and Ranôrovêlo.

low *sohérina* is the word for chrysalis, especially for that of the silkworm moth; but having been dignified by being chosen as the royal name, became sacred (*fady*) and could no longer be employed for common use; and the chrysalis thenceforth was termed *zàna-dàndy*, 'offspring of ilk.' So again, if a chief had or took the name of an animal, say of the og (*ambôa*), and was known as Ramboa, the animal would be henceforth called by another name, probably a descriptive one, such as *fandroaka*, e. 'the driver away,' or *famôvo*, 'the barker,' etc.

As far as we can ascertain, this tabooing of words in the names of chiefs seems hardly to have been carried out by the Hova to such an extent as it is, or has been, by the other Malagasy tribes; although possibly this seeming exception is only due to that centralization of authority in Imerina which has been going on for nearly two centuries, and which has gradually diminished the practice, and has thus reduced to a minimum the variety of nomenclature it would otherwise cause. With one sovereign, instead of a great number of petty chiefs or kings, the ranges would of course be minute and would leave no great impression on the language. But we can easily conceive what a most annoying confusion and uncertainty would be introduced into a language by a very wide extension of such tabooed words, arising from a multiplicity of chiefs. It is as if we in England had had to avoid, and make substitutes for, all such words as 'geology,' 'geography,' etc., because they formed part of the name of King George; and such words as 'will,' 'willing,' 'wilful,' etc., because they were part of the name of King William; or had now to taboo words like 'victory,' 'victim,' etc., because these syllables form part of the name of Queen Victoria. It can hardly be doubted that this custom has done very much to differentiate the various dialects found in Madagascar; and it is a matter for some surprise that there is not much greater diversity among them than we find to be actually the case.

Among the western tribes of the country, on account of the large number of petty but independent and absolute kings, a great deal of change in the spoken language does take place. Mr. Hastie, who was British agent at the Court of Radama I., says: "The chieftains of the Sakalava reverse that any name or term should approach in sound either the name of themselves or any part of their family. Hence, when it was determined that the mother of Ratàratsa, who came unexpectedly into the world, should be named Ravahiny [*vahiny*, a stranger], it was forbidden that the term *vahiny* should be applied to any other person except herself; and the worth *ampainsick*\* was instituted to denominate 'stranger.' From similar causes the names of rivers, places and things have suffered so many changes on the western coast, that frequent confusion occurs; or, after being prohibited by their chieftains from giving to any particular terms the accustomed signification, the natives will not acknowledge to have ever known them in their former sense."

One more point as to Malagasy royal names must conclude this paper. Among the Sakalava the chiefs' names are changed as well as among the Hova, not, however, at their accession to power, but after their death. A new name is then given to them, by which they are ever afterwards

\* In Dalmond's *Vocabulaire Malgache-Français pour les langues Sakalave et Betsimisaraka*, p. 5, I find this word thus given: "AMPENTZEK, s. Neuf, nouveau, nouvel arrivé."

known, and it is a crime to utter the name by which they were called when living. These posthumous names all begin with *Andrian-* (prince) and end with *-arivo* (a thousand), signifying that such a chief was a 'prince ruling over,' or 'loved by,' or 'feared by,' or 'regretted by, thousands' of his subjects. Thus a chief called Raimôsa, while living, was termed *Andriamandfonarivo* after death; another, called at first Mikâla, was after death known only as *Andrianitsôanarivo*. M. Guillain says: "This custom was not confined to the Sakalava; it existed among the different populations of the south of the Island, in Fiherenana, Mahafaly and Androy." Drury also (in whose substantial accuracy I still believe, *pace* Capt. Oliver) says: "They also invoke the souls of their ancestors and hold them in great veneration; they call them by names which they give them after their death, and even regard it as a crime to mention them by that which they bore when living; and these names are principally characterised by the word *arivou*, which terminates them."

JAMES SIBREE, JUN. (ED.)

### HAVE WE A 'POSSESSIVE CASE' OR A 'CONSTRUCT STATE' IN MALAGASY?

IN teaching the grammatical parsing of Malagasy sentences our pupils are instructed (by our grammars) to ignore altogether one of the regular forms of the language, and to treat, for instance, the phrase "*Ny lamban' Andrianaivo*" just as if it were written "*Ny lamba Andrianaivo*." And yet this disregarded inflection is so important that its presence may give a totally different meaning to a sentence in Malagasy. Here are examples:

1. *Tsy mety raha maha ny lamban' Andrianaivo*. (It is not right to take Andrianaivo's lamba.)

1a. *Tsy mety raha maha ny lamba Andrianaivo*. (It is not right for Andrianaivo to take

2. *Misy manimba ny tranon' ny zanakao*. (Some one is injuring your children's house.)

2a. *Misy manimba ny trano ny zanakao*. (Some one of your children is injuring the house.)

In the former of the two sentences the subject is understood; I think, however, it will be agreed that this occurs commonly, especially in colloquial Malagasy where a general injunction is given.

No one can mistake the very different meanings of the two sentences in each group; and yet the inflection of the words *lamba* and *trano*—the sole difference between the sentences in each pair—is quite ignored in the parsing of these words, although the thing of which it is the sign, and the only sign, is, of course, recognised. In the "Concise Introduction to the Malagasy Language" (*Mal.-Eng. Dictionary*, p. xl.), this inflection or affix is called a *pronoun*. Is this a correct description? or is not the *-ny* (or *-n'*) rather a euphonic addition for the purpose of more closely connecting the two nouns (viz. the governing noun and the genitive), and thus analogous to the 'construct state' in Hebrew? (Vide *Rodiger's Gesenius's Hebrew Grammar*, trans. by Dr. Davies; sect. 89, par. 1.) The manner of inflection is different in the two languages, the Hebrew changing the middle of the word, the Malagasy its ending; but with this exception, and omitting, of course, the examples, the paragraph above referred to from Gesenius appears to me to be wholly and thoroughly applicable to the Malagasy language. I venture to hope that this analogy may be recognised, and the 'construct state' find a place in future editions of Malagasy grammars, so that this important inflection of the nouns may no longer be ignored in their parsing.—A. P. PEILL.

## FUNERAL CEREMONIES AT THE BURIAL OF RADAMA I.

ON Sunday, the third day after the announcement of the death of Radama (August 4, 1828), there was a large *kabary*, or national assembly, held in a fine open space in the city, on the west side of the one on which Antananarivo stands. In this space were assembled from 200 to 30,000 persons, seated in groups according to the districts which they belonged to.

At the close of this *kabary* it was proclaimed that, according to the custom of the country, as a token of mourning, every person in the kingdom of every age must shave or cut off closely the hair of their heads, whosoever should be found with their heads unshaved, after three days from the proclamation, should be liable to be put to death. Also, no person whatsoever should do any kind of work (except those who should be employed in preparing the royal tomb, coffin, etc.); no one should presume to sleep upon a bed, but on the floor only, during the period of mourning. No woman, however high her rank, the Queen only excepted, should wear her *lamba* or cloth above her shoulders, but must, during the same period, go always with her shoulders, chest, and head uncovered.

During the interval between this Sunday and the 12th instant, the mournful and silent appearance of the city, though tens of thousands of persons were constantly crowding through the streets—some dragging large pieces of granite or beams of timber, or carrying red earth in baskets on their heads, for the construction of the tomb; others, and especially chiefly females, going with naked heads and shoulders, to the place to mourn, or else returning from that place after staying there as mourners perhaps twelve hours,—was exceedingly impressive. The air was deep melancholy on the countenances of all, and the audible moanings of the multitudes who filled the courts of the palace and the adjoining streets, quite affected us, and produced the conviction that the grief was deep and deep for one whom they regarded as their benefactor and father, and as the best king that Madagascar had ever known. The chiefs of the principal chiefs from the neighbouring districts were carried off from the place of mourning, each on the back of a stout man, just in the manner boys at school are accustomed to carry one another: the person having her person, from the waist to the feet, covered with her *lamba* or cloth.

On Sunday, the 11th, Her Majesty sent to us to say that we might be present the day after, to assist at the funeral ceremonies; and that General Brady would, at eight a.m., receive us\* at his house and conduct us to the palace. Accordingly, at eight on the 12th we attended, when General Brady and Prince Correllere conducted us through the crowded

\*George Bennet, Esq., one of a Deputation from the London Missionary Society, and then residing here in Madagascar their visitation of the various stations occupied by the Society in different parts of the world.—EDS.

streets of mourners, through the guards of soldiers, and through the still more crowded courts of the palace, which were thronged chiefly by women and girls, couched down, or prostrate in many instances, making audible lamentations.

There are several courts, with one or more palaces in each, separated from each other by high wooden railing; and the whole of the courts and palaces are surrounded by a heavy railing of great height, twenty-five feet, including a dwarf stone wall on which the wooden railing is fixed. The whole extent of this railing was covered with white cloth, as were also the oldest and most sacred of the palaces. The favourite palace of Radama, in which he died, and where in fact the body then lay, is called the Silver Palace; it is a square building, of two floors, and two handsome verandahs running round it. This palace is named the Silver Palace on account of its being ornamented, from the ground to the roof, by a profusion of large flat-headed silver nails and plates of the same metal. The roof of this palace (as indeed of all the principal houses), a very high pitched roof, is so high, that from the top of the wall to the ridge is as great a distance as from the foundation to the top of the wall supporting the roof. We found it covered from the roof to the ground with hangings of rich satins, velvets, silks, their native costly silk *lambas*, etc.; and all the vast roof was covered with the finest English scarlet broad cloth.

In front of this palace had been erected a most splendid pavilion, surrounded by highly-decorated pillars, which were wrapped round with various coloured silks, satins, etc. The pavilion was ten feet square, raised on pillars also richly ornamented. A platform of wood was thrown over upon the pillars; and above this platform hung, supported by one transverse pole, an immense canopy or pall of the richest gold brocade, with stripes of blue satin and scarlet cloth; the whole bordered by a broad gold lace and finished by a deep gold fringe. All the arrangements were in good taste and formed together a most brilliant spectacle.

We had nearly reached the Silver Palace when we were stopped, it being announced that the corpse was at that moment about to be brought out, to be conveyed to the more sacred White Palace previous to its being entombed. We immediately saw about sixteen or twenty females brought out of the apartment where the corpse lay, each lady on the back of her stout bearer, weeping and lamenting aloud; these were the queens and princesses of the royal family and formed the first part of the procession from one to the other palace; our place was appointed immediately after the queens, but it was with difficulty we could get along, many females having thrown themselves on the path which was to have been kept open. The mourners had done this that the corpse might pass over them, and we in fact were many times under the necessity of treading upon their prostrate persons. The corpse was carried into the White Palace that it might, in this more sacred place, be stripped of its old clothes and clothed with new, and also that it might be placed in a wooden coffin. In this palace we were honoured with a station not far from the corpse, which was being fanned by about sixteen or twenty young ladies, daughters of principal chiefs.

At eight, on the morning of Tuesday, we were again at the palace, and were conducted by General Brady and Prince Correllere through the crowds of mourners, indeed over some of them, as well as over ten fine favourite bulls of the late king; these lay directly in our path, and we could not help treading on them. The paths were all covered with blue or white cloth of the country. The corpse had been transferred at the close of the day before to a huge coffin or chest, of their heaviest and most valuable wood. The coffin was then carried from this White Palace back to the Silver Palace in solemn procession, the queens, etc., following next the coffin, and we succeeded them; some of the Europeans had accepted the honour of assisting to carry the coffin, which was a tremendous weight, judging from appearance. I declined the honour, charging myself with the care of our missionary ladies.

On again reaching the Silver Palace, the coffin was not taken in, but raised upon the wooden platform over the pavilion, over which the splendid pall or canopy of gold was drawn, which concealed it entirely from view. In this pavilion, under the platform (which was raised about seven feet), upon mats placed on the ground, the royal females seated or threw themselves in seeming agonies of woe, which continued through the day; and at sunset, when the entombment was taking place, their lamentations were distressing in the extreme. All the day great multitudes had been employed in preparing the tomb, which was in the court, and not far from the pavilion. This tomb, at which tens of thousands had been incessantly working ever since the announcement of the king's death—either in fetching earth or granite stones or timber, or else in cutting or fitting the stones, timber, etc.—consisted of a huge mound of a square figure, build up of clods and earth, surrounded or faced by masses of granite, brought and cut and built up by the people.

The height of this mound was upwards of twenty feet; about sixty feet square at the base, gradually decreasing as it rose, until at the top it was about twenty feet square. The actual tomb, or place to receive the coffin and the treasures destined to accompany the corpse, was a square well or recess, in the upper part of this mound or pyramid, about ten feet cube, built of granite and afterwards being lined, floored, and ceiled with their most valuable timbers.

At the foot of this mound had been standing most of the day the large and massy *silver coffin*, destined to receive the royal corpse; this coffin was about eight feet long, three feet and a half deep, and the same in width; it was formed of silver plates strongly rivetted together with nails of the same metal, all made from Spanish dollars: *twelve thousand dollars* were employed in its construction. About six in the evening this coffin was by the multitude heaved up one of the steep sides of the mound to the top and placed in the tomb or chamber. Immense quantities of treasures of various kinds were deposited in or about the coffin, belonging to His late Majesty, consisting especially of such things as during his life he most prized. *Ten thousand hard dollars* were laid in the silver coffin for him to lie upon; and either inside, or chiefly outside of the coffin, were placed or cast all his rich habiliments, especially military: there were eighty suits of very costly British uniforms, hats

and feathers; a golden helmet, gorgets, epaulettes, sashes, gold spurs, very valuable swords, daggers, spears (two of gold), beautiful pistols, muskets, fowling-pieces, watches, rings, brooches, and trinkets; his whole superb sideboard of silver plate, and large and splendid solid gold cup, with many others presented to him by the King of England; great quantities of costly silks, satins, fine cloths, very valuable silk *lambas* of Madagascar, etc., etc.

We were fatigued and pained by the sight of such quantities of precious things consigned to a tomb. As ten of his fine favourite bulls had been slaughtered yesterday, so six of his finest horses were speared to-day and lay in the courtyard near the tomb; and to-morrow six more are to be killed. When to all these extravagant expenses are added the 20,000 oxen, worth here five Spanish dollars each (which have been given to the people and used by them for food during the preparation for, and at the funeral), the Missionaries conjecture that the expense of the funeral cannot be less than *sixty thousand pounds sterling*. All agree that though these people are singularly extravagant in the expenses they incur at their funerals, yet there never was a royal funeral so expensive as this, for no sovereign in this country ever possessed one fifth of his riches.

The silver coffin having been placed in the tomb, the corpse in the wooden one was conveyed by weeping numbers from the top of the platform over the pavilion to the top of the pyramid and placed beside the chamber. Here the wooden coffin was broken up, and the corpse exposed to those near. At this time the royal female mourners, who had been all day uttering their moans in the pavilion, now crawled up the side of the pyramid to take a last view of the remains. They were most of them obliged to be forced away; their lamentations were now very loud and truly distressing to hear. The expressions used by them in lamentation were some of them translated for us: the following was chiefly the substance:—"Why did you go away and leave me here? Oh! come again, and fetch me to you!" The body was transferred from the coffin of wood to that of silver. Those who were engaged in this service seemed to suffer from the effluvia, though many wore constantly employed in sprinkling eau-de-cologne. When the transfer had taken place, the wooden coffin was thrown piecemeal into the tomb.

During the whole of this day, while the chamber in the tomb was being prepared, the King's two bands of music, with drums and fifes, etc., were in the court and played almost unceasingly, relieving each other by turns. The tunes were such as Radama most delighted in—many of the peculiar and favourite airs of England, Scotland, and Ireland, with waltzes, marches, etc. During intervals cannon and musketry were fired outside of the courts of the palace, and answered by musketry from the numerous soldiers inside of the courts.

On the whole, while this funeral of Radama was the most extravagant, it was the most splendid and orderly thing that could be conceived amongst such an uncivilized people.

*Extracted from VOYAGES AND TRAVELS ROUND THE WORLD BY THE REV. DANIEL TYERMAN AND GEORGE BENNET, ESQ. London: 1840; 2nd. ed. pp. 284-286.*

## SIKIDY AND VINTANA:

HALF-HOURS WITH MALAGASY DIVINERS. (NO. II.)

(Continued from ANNUAL No. X.)

THE WORKING OF THE SIKIDY (continued.) B.—*The Sikidy of different (Unique) Figures, 'Sikidy Tôkana' (continued).* Before leaving this section, I must add a few words on two kinds of *sikidy* which are closely connected with the preceding twelve classes, and are by the natives called respectively *Sikidy Mifamàly* (i.e. *sikidy* mutually corresponding to one another) and *Sikidy Fanahàna*, which my helper explains to mean *fanàtitra hasàlony* ('a sacrifice as substitute for a person').

1. The first one is of less importance and may be sufficiently explained by the following short rules:—

(a) If the figure *Sàka* occurs in *Tràno* and *Kizo* in *Talt*, or if, in reverse order, *Kizo* occurs in *Trano* and *Saka* in *Tale*, this is called *Port-dàhy* ('Thoroughly squeezed'?). The meaning is that you have to trample in the mud, and the clods of mud squeezed out under your feet you must throw away as *fàditrà* (to prevent yourself from being dashed or crushed).

(b) If *Alaimôra* occurs in *Fàhasivy*, or *Kizo* in *Tale*, it is called *Lôhi-hênjana* ('The strong one'), and two hens are to be beaten against the earth to avert evil.

2. The *Sikidy Fanahàna* is a much grander affair. The figure in question seems chiefly to have had the office of intimating that some young man was in danger of dying; and the rules accompanying it point out the means of averting the evil. The following seems to be the substance of it:—

(a) If *Alaimora* is the unique figure in a *sikidy* and happens to occur in the rubric *Fàhavo*, this is called *Màsoandro-mandàlo* ('The passing sun'), which intimates that there is danger of a man dying; and the following is the procedure resorted to in order to avert the evil: a red cock is fetched and adorned with crocodile's teeth and a piece of bark of the *Nàto* tree, which has been soaked in boiling water for a night. This cock is brought to a place to the east of the house, a little before sunrise, and is put on a new mat on which no one has yet slept. The *mpisikidy* or *mpisôrona* (priest) who is to perform the act must wear a red *làmba* (a large piece of cloth very much like the Greek *epiblema* or *himation* and the Roman *amictus*), and a piece of black cloth on the back, both new, and at any rate not sewn or mended ("tsy nodiàvim-panjaitra akôry; fa fàdy izàny"). The man for whom the *sikidy* is worked must place himself on a similar mat in the house and wear a similar dress. The *mpisikidy* then exclaims: "The sun is 'supported' (*fàhana*) by us so as not to pass by such an one. Such an one is supported by us so as not to be passed by (*lalôvina*) the rays of his sun (*zàra-masoandrony*, which my native helper explains as=*Andriamdniny*, 'his God'). Then as soon as the sun rises, the *mpisikidy* cuts off the head of the red cock, enters the house



with the bloody knife in his hand, and touches with this the person for whom the *sikidy* is made.

(b) If *Alaimora* comes into *Tale* and *Adibijady* into *Fahasivy*, or *Adibijady* into *Fahasivy* and *Alaimora* into *Tale*, it is called *Lehi-henjana* ('The strong one'), and the meaning is, that a son of young parents is likely to die young, if some effective remedy is not resorted to. And this is the remedy:—Two bullock's horns (one from the right and one from the left side of the head) are taken and placed on the top of a piece of *Hazo-bôka* (literally, 'the leprosy-tree,' a kind of tree), which is then erected close to a river, so as to throw its shadow on the water. This being done, a trench is made from the water up into the land. Then the man for whom the *sikidy* is worked enters into this trench and through this into the water. Finally, an assistant takes the trunk of a banana tree, of the same length as the man for whom the *sikidy* is worked, puts it into the trench and joins the *mpisikidy* (or *mpisorona*) in exclaiming: "This is a substitute for such an one; if you mean to take him, O God! This is an effective substitute, a valid one indeed ('*takalo mähatakalô, sôlo mähasôlo iô*'); therefore, take this, O God, and let such an one live long on the earth and eat good rice (*robjo*), and let him be free from the lot of dying young!" About sunset the man in question is sprinkled with *rânon-aody* and *râno-tsilon-dôsa* (two kinds of consecrated water, I suppose), and the proceedings are at an end.

C.—*The Sikidy of Combined Figures (Lôfin-tsikidy)*. My native helper was astounded at my ignorance when I was forced to confess that I neither knew the noun *lofika* nor the verb *mandôfika*, which he explained to mean respectively 'investigation' and 'to investigate,' and I can assure you that he gave me a look expressive of a profound disrespect for our Malagasy-English Dictionaries, when I, in excuse for my own ignorance, ventured to point to the fact that none of them had got any root *lofika* in this sense. "*Asan' ny Vazaha tokôa irèny*" ('Those are the works of Europeans indeed'), he said. And as the word was to him the technical name of very complicated proceedings depending on no less than eleven rules, I can quite understand that I did not look much wiser in his eyes than a man who did not know the words theology or grammar would have done in mine. He was, however, forced to admit that the word only occurs in the *sikidy* terminology, and is restricted to the peculiar proceeding by which new figures are formed from those already occurring in an ordinary *sikidy*, by combining two and two of them. This explanation put me on the track as to its etymology and origin. As it is never used but in the *sikidy*, and is only applied to the process of forming new figures by a combination of two existing ones, it is evidently the Arabic *lafaq*, which means 'to connect,' especially to combine two things into a new one ('*junctis duabus partibus consuit, connexuit*').

It may happen that neither the ordinary *sikidy* nor the *Sikidy Tokana* gives any reasonable answer to the questions, and then the *Lôfin-tsikidy* is the final resort. The general rules for this operation are the following:—

1. You may combine the figures in any two rubrics of an ordinary

*tsàngan-tsikidy* (i.e. an arrangement like the one given in my diagram) by means of combination, in the very same manner as that by which all the other rubrics in the diagram (on p. 226) were filled from the four at the top of it.

2. These new figures must of course be like some of the 16 figures we have enumerated; but the rubrics they are to occupy get new names and consequently give us materials for new answers. Their names do not, however, depend on what figures come out, but from what rubrics (i.e. by the combination of what rubrics) they have been derived. For instance, if I compare the figures in the two rubrics *Fahasiny* and *Andro* (square by square), and put one bean in the corresponding square of the new rubric, when that combination gives us odds, and secondly, when it gives us equal numbers, we may of course get any of the 16 figures in our new rubric. This depends on what figures we may happen to have in the two rubrics we are combining; if they were like those in my diagram, the new one would be an *Adibijady* (∴); but this rubric will always have the name *Lòsabò* ('Great calamity'). In the same manner a new figure formed from the two rubrics *Fahasiny* and *Vohitra* would always be considered as having its home in a new rubric called *Rèsy* ('Conquered').

3. But these new combinations are by no means restricted to a combination of two and two of the rubrics in my diagram. There are three other possibilities, and they are all made use of, viz. :—

(a) Only a part of some rubrics may be combined with another part of the same rubrics, or with a part of other rubrics. In this way we can, for instance, combine the two upper squares in *Fahasiny* and *Marina* with the two lower ones in *Andro* and *Nia*, and we then get a figure whose rubric is called *Mosàvin' ny àvo-razana* ('Bewitched by people of high family'), a rather startling answer to the question, "What is the matter with me?"

(b) One of the rubrics in the diagram may be combined with one of the new ones; for instance, *Vohitra* may be combined with *Rèsy*, which would give us a new figure, the name of whose rubric is *Rèsy an-tànin-drdzana* ('Conquered with regard to a lawsuit on (or, respecting) one's native soil?').

(c) Two of the new rubrics may be combined with one another in the same manner. *Mosavin' ny avo-razana*, for instance, may be combined with another new one, *Mosàvin' andévo* (which is itself the outcome of *Mariny* and *Mariny an-trano hafa*); and the result will be a new figure, the name of whose rubric is the terrible one, *Mosavy mahafty*, i.e. 'Bewitchment that kills.'

But these combinations are not at all done at random; on the contrary, they are subjected to strict rules, stating clearly which two rubrics can give birth to such and such a new one. In this manner my native teacher manages to get 81 new rubrics (i.e. besides those in the diagram), subjected to as many rules, and contributing materials for as many new answers to questions. The relation of these new rubrics to the question to be answered is the same as that between the original rubrics (in the diagram) and the questions; that is to say, when I, in the proceeding

just described, come to a rubric the name of which can fairly be taken as an answer, and the figure of which is like the one in the rubric representing my question (e.g. *Tale*), then—and not until then—I shall have finished my operations.

If, however, I were to give all the 81 new rubrics, with their respective rules, I should want all the space of this number of the *ANNUAL*. I have therefore restricted myself to the general theory of the proceedings. But I am afraid the reader may find it quite intricate enough as it is. This *sikidy* really reminds one of the Danish proverb: "Deceit is a science, said the Devil, when he gave lectures at Kiel."

My native helper gives me, as an appendix to this chapter, a long list of rules (23 in number) regarding *famadirana* (the orthodox manner of obtaining *faditra* (*piacula*) for the different evils to be averted; but as I am obliged to abbreviate, I shall not be able to reproduce it here.

VI.—MISCELLANEOUS SIKIDY. In all the varieties of *sikidy* we have hitherto dealt with, the chief object in view has been to get an *answer to questions*, while it has been only a secondary and subordinate object to find out the *remedies against evils*, that is, if the answer informed us that some evil might be apprehended. But now we come to some *sikidy* practices, the chief object of which was to *remedy the evils*, or to procure a prophylactic against them. To this class belong the *Ody basy*, the *Fampidiran' dloka*, the *Fangaldn-keo*, and others. In other forms of this miscellaneous *sikidy* the object aimed at was, to find out *times and directions*, when and where something was to be found, or was to take place. This was the case in *Andron-tàny* and *Andro fòtsy*, and some others.

A.—*Ody basy* (Charms against guns). The name (*gun-charms*) seems to suggest that this kind of *sikidy* must be of a comparatively recent origin, as guns have scarcely been known here for much more than a century; at least they have not been used much earlier in war to such an extent as to call for a special protecting charm, *the charm in war*. But I suspect that the *sikidy* practice in question is much older; and the name may have been modernised a little since guns came into use. Before that time the charms were probably called *Spear-charms*; and even later on we find the expression *odim-basy aman-difona* (charms against guns and spears). The comparatively simple rules for this kind of *sikidy* are the following:—

1. Such a *sikidy* was invariably to be undertaken on the last one of the two days in each month which borrowed their names from the month *Adàlo* (*Vòdin-adàlo*), because the object of the charm was, so my native informant says, to make the ball (or spear) *mandàlo* (pass by [without hitting]) the person for whom the *sikidy* was made; a very curious little piece of *Malagasy* etymology for an *Arabic* word (*Adalo*=*Ar. Ad-dalvu*, Aquarius in the Zodiac).

2. Next come the rules for the erecting of this *sikidy*, which seems to have been a very laborious affair. The great object was to get a *sikidy* in which the figure *Aditsimà* ( 𐌸𐌰𐌹𐌳𐌰𐌶𐌰𐌿 ) occurred in the rubric *Andriamanitra* (God), and nowhere else (i.e. in no other rubric in the same *sikidy*). If this did not happen, he had to erect the *sikidy* anew over and over

again until it happened. And as he must have seven such *sikidy* in which *Aditsimà* happened to fall into the rubric *Andriamanitra*, it must often have taken a very long time before the business was finished, if the arrangement was left to hap-hazard. But a good diviner was of course supposed to be *inspired*, and then he may have hit upon it at once.

3. Having at last finished his seven *sikidy* of the said description, he took out the beans forming the figure *Aditsimà* in all of them, and applied these beans to the thing (for instance, a piece of wood) to be used as a gun-charm. In what manner he applied them to it is not quite clear to me. My native helper simply says that he "mixed them with it" ("*nahàrony lāminy*"); but anyhow this 'application' made the said thing a sure charm against guns.

One may ask why the figure *Aditsimà* in the rubric 'God' should have such a protecting power. I do not doubt that the natives explained this from the etymology suggested by their pronunciation of *Aditsimà* (*Aditsimay*, literally, 'a battle that does not burn', thinking that when this figure occurred in the rubric 'God,' it naturally meant that God would make the battle tolerably moderate (not too hot!) for the man who wore the charm. But this etymology is of course not the true one of the Arabic word *Aditsimà*. Treating of *Aditsimà* among the 16 figures in the beginning of this article, I was at a loss as to its etymology. Seeing now the special meaning it has here of a *protecting* charm, it has occurred to me that it may be a corruption of the Arabic *al-himà*, the inaccessible, the protected one (*hama*, to protect against evils; *humāya*, protection against danger). This would at any rate agree exceedingly well with the use of that figure here, for it would then mean 'Protection from God,' and reminds one of the Arabic saying: "Nobody is infallibly protected (*himà*) but God and His Prophet" (i.e. Mohammed).

B.—*Odim-bàrotra* (Trade-charms). These were used to make trade successful. They were effected by erecting a *sikidy* in which there occurred eleven *Adikasàjy* (⋮). The beans of these eleven identical figures were then applied to the things to be used as charms to make trade succeed well.

C.—*Odim-pitla* (Love-charms). These were prepared in a similar manner, but by erecting a *sikidy* in which the figure *Vontsira* (⋮) occurred in the rubric *Harèna* (and nowhere else), and the figure *Kizo* (⋮) in the rubric *Nia* (and nowhere else). Such a *Vontsira* was called *Mdmy dho* ('I am sweet'), and such a *Kizo*, *Kély momba ny nahiny* ('Small and [but?] sticks to what is intended'). The charms prepared in this manner were also used as trade-charms, as the great object in view in trade also is to make the customers 'love' the things (i.e. like them—a Malagasy idiom).

D.—*General charms* (Charms for everything). If a *sikidy* was erected in which the figure *Vànda miòndrika* (⋮), also called *Mòlahidy* occurred only in the rubric *Andriamanitra*, this was a good general charm for everything.

E.—*Fànindri-lôa* (Charms against vomiting). The description my native helper has given of this and the next operation is not very clear to me, but, as far as I can make out, the *mpisikidy* arranged his beans

so as to make a rough picture of a man (sometimes he seems to have made this picture in the sand). Then he gathered them together and mixed them with a decoction of the two plants *Afèron-tàny* (*Mollugo nudicaulis*) and *Tambitsy* (*Psorospermum androsæmifolium*, Baker) and made the vomiting person drink it; and after having also made him drink some gravy of fat beef (*ron' omby matavy*), he was cured (no doubt about it!).

F.—*Odin' ny òlona tòhina* (Charms against dislike to food). Here is a useful prescription for those whose appetite is failing. The *mpisikidy* arranges his beans so as to make four figures. The first one is a *Vanda miondrika* (: ::); the second and third represent the backbone of a man (*columna vertebralis*); the fourth one a bird. Then he gathers his beans, mixes them with water (by means of seven pieces of *Vérivólaka*), and makes the person in question drink the water, and the cure is complete. At any rate the *mpisikidy* did not, I believe, mention a single case in which it had failed! This operation was called *Táfik-arétina* ('War against diseases').

G.—*Fangalàn-keo* (Remedy for diseases caused by eating food in which there was a *matbatôa* [the spirit of a dead man]). *Fangalan-keo* is of course the catching of a *keo* (or *heo* it might be); but what is *keo*? My native informant says it is a disease caused in the manner indicated above, and manifesting itself chiefly by vomiting and dislike to food. It is certainly not a Malagasy word, as it occurs only in the *sikidy* (perhaps it is the Arabic *qaiu*, vomiting).

The following seems to have been the procedure of the *mpisikidy* in such a case:—If he suspected that the disease of his patient had been caused by eating some food in which there had been a *matatoa*, he fetched water from nine different valleys (*lôhasàha sivy*) and nine different kinds of food, as sweet-potatoes, earth-nuts, etc. (but not including rice, "*fa ny vary dia Andriamanitra*" ["the rice is God"], says my native). Having got all these before him he began to examine them severally, asking each of them (or, rather, the spirit in them): "Is it thou who hast made this man ill?" to which questions the *mpisikidy* himself gave the answers (of course only as interpreter of the spirit) in the negative or affirmative. Having at last got an affirmative answer, he took a cooking-pot and made three lines across it inside: one with white earth, one with red, and one with a piece of charcoal—"as he could not beforehand know whether the *matatoa* in question was that of a white man, or of a red one, or of a black one," says my native helper. This being done, he put some fat into the pot and placed it over a fire in the middle of a road. While burning the fat in this manner he invoked the *matatoa* in question not to trouble the sick person any more, as he now had got his offering for the sin committed in eating the food in which he was. My informant adds that he could not give very full information on this subject, as he was still a young man when he learned *sikidy*; and the wise men at Ambàtofinandrahana did not think it proper to trust such deep secrets to a youth, as it was their opinion that he would in that case die young.

H.—*Fampodian' àloka* or *àmbirôa* (The bringing back a semi-departed

pirit). If a man was very ill, and especially if he was very dispirited, the *mpisikidy* seems to have taken the last expression literally, presuming that his spirit (*ambiroa* [=Ar. *ar-ruah*, the spirit], or *aloka* [his shade]) had actually left him. But nevertheless he did not despair of curing him, but immediately set to work to bring the spirit back, resorting for his purpose to the following means: (1) He made a figure in the sand, representing in a rough way a human form. (2) He erected a *sikidy* in which there were to be eight *Vontsira* ( : : ). These were called 'The eight healthy men' (*My valo làhy salàma*). (3) He erected another *sikidy*, in which the figure *Asòralàhy* ( : : ) was to occur in the two rubrics *Tale* and *Andriamanitra* and nowhere else. This was called 'The present Creator' (*Zànahàry manàtrika*). (4) He erected another again in which the figure *Alahizàny* ( : : ) was to occur in the rubric *Trano* and nowhere else. (5) Finally, all these figures (i.e. the beans comprised in them) were gathered and mixed with the sand of the human figure mentioned above. To this mixture was then again added the fruit (or leaves?) of the *Nònoka* and *Aviàvy* trees (two species of *Ficus*) and the *Tsitòhidòhina* *Equisetum ramosissimum* and *Arivotaombelona* (literally, 'living 1000 ears,' the name of a plant [*Polygonum senegalense*]), some few hairs of bullock (taken from beneath the ears), a piece of bullock's entrails (*tsinaim-bèrin-kèna*), and some dry grass, chosen from that on which the sick man had walked, and so placed as to point with their tips towards his house. All these things were then to be pounded together in a mortar by the sick man, while the *mpisikidy* was beating a blunt spade (*angddi-mòndro*) over his head, invoking his powerful *sikidy* to bring the spirit back, in the following manner: "Bring back the shade (*aloka*); bring back the ghost (*ambiroa*); even if he has been buried in the grave, even if he has been sunk down in the waters, etc. O, bring him back, 'Eight healthy men,' bring him back, thou 'Present Creator,' bring him back, thou *Alahizàny*; for there is nothing ye cannot effect, nothing so far off that ye cannot reach it," etc.

I.—*Andron-tàny* (literally, 'The days of the land,' but in the sense of the different quarters or directions of the compass, as expressed by the place in the house assigned to each day). What is really meant by this somewhat indefinite heading is the art of finding out in what direction north or south, etc.) you are to seek for a thing that has been lost, stolen, or gone astray, etc. I do not, however, mean to reproduce the eleven rules of my native about this procedure. Suffice it to say that if the *sikidy* brought out a certain figure in a certain rubric, the thing was to be looked for in one direction (e.g. to the south); if it brought out another, then in another direction (e.g. to the east). The rules then point out which figure agrees with each direction. These directions, however, are not named north, south, east, west, etc., but they take their names from the sides and corners of the house, as designated in the arrangement of the month all around the house (inside), one at each corner, and two on each side. If therefore the *sikidy* brought out a figure which pointed to the south-east, the *mpisikidy* did not call it so, but said it pointed to *Asòro-àny*, the name of a constellation of the Zodiac (Cancer) and of a Malagasy month, which, in the arrangement alluded to above, had its place

assigned to it at the south-eastern corner of the house, as will be shown more clearly under *Vintana*.

J.—*Andro fôlsy* (literally, 'White days,' i.e. the days on which something expected or sought for was to happen). Suppose that I have lost a slave. It is of the utmost importance to me to know on what day I shall find him; for then I do not trouble myself about searching for him before the day has come. Consequently I go to the *mpisikidy*. He consults his code of laws (which of course he has in his memory, and does not need to go and look up in a book, as we look for a passage in the Bible) and finds the following seven rules for the seven days of the week, commencing with Alarobia (Wednesday), which is therefore in this chapter called "Mother of the days" (*Rënin' ny andro*, or *Reni-andro*):— (1) *Harena* and *Fahasivy* form Alarobia. (2) *Fahatelo* and *Marina* form Alakamisy. (3) *Vohitra* and *Nia* form Zomà. (4) *Andriamanitra* and *Zatovo* form Asabôtsy. (5) *Marina* and *Asorotany* form Alahady. (6) *Vehivavy* and *Mpanontany* form Alâtsinainy. (7) *Fahavalo* and *Lâlana* form Talàta. This means that if the *mpisikidy*, after having erected his *sikidy*, by comparing the figures in the rubrics *Harena* and *Fahasivy* in the manner described under chap. iv., § 2 (ANNUAL X. p.229), brings out a new figure which is like the one in the rubric representing the question (generally *Tale*; see p. 230, last clause), then he knows that what he asks about will occur on Alarobia. I have chosen only the first of the seven rules for illustration; but quite the same proceeding is applicable to the remaining six.

It is easy to see that this was a very convenient way of saving much time and trouble. Suppose I expect a friend from Fianàrantsôa on Monday; but he may have postponed his departure from that place, or he may have been delayed on the road; well, I go to the *mpisikidy*, and he tells me that he will not arrive before Saturday. Fancy now that I had not been prudent enough to do so; what would have been the consequence? To say nothing of other inconveniences, my wife would certainly have kept the dinner ready for him from noon to night every day from Monday to Saturday; and if she had not been an angel—which of course she is—she would certainly have looked very cross when he at last appeared! What a blessing these *mpisikidy* must have been, especially in the good days of old, when there were no doctors and no telegraphs!

It has frequently come before our notice in the preceding sections that all depended on what figures were placed in each rubric by the erecting of the *sikidy*. As the first four rubrics were filled in a manner that seems to have depended entirely on hap-hazard, and the filling of the others depended upon these four (see chapter iv. § 1 and 2, p. 229), we should conclude that nothing so far was arbitrary, and that the *mpisikidy* had no control over the form of the *sikidy* he erected, or, in other words, that he could not decide beforehand what figures he would get in each rubric. But I understand that sometimes (e.g. in producing love-charms, trade-charms, etc.) he took the liberty of filling the first four rubrics with figures which he knew beforehand (from theory and experience) would, in the further procedure, produce exactly the figures

he wanted, and in the rubrics he would want them, for the *sikidy* in question. How else could he have got a *sikidy* in which *Adikasajy* ( ∴ ) occurred eleven times? or in which *Vontsira* ( ∴ ) occurred eight times? or in which *Vontsira* came into *Harena*, and *Kiso* ( ∴ ) into *Nia* and nowhere else? I believe he would often have had to erect his *sikidy* some thousand times, before that could 'happen,' if he did not 'make it happen' in the manner intimated above. No doubt he generally began working on the hap-hazard principle; but after having destroyed his erected *sikidy* several times and begun anew—just sufficient to make his spectators understand that it was a very serious affair—he had resort to artificial means and *made* it succeed. I fancy that this was the general practice in producing the charms described above.

I have not exhausted the subject of Miscellaneous *Sikidy* yet, but I must stop here, as every thing must have an end. And if I had described all the tricks of the diviners, and, especially, if I had tried to expose all the artifices by which they managed to make their business pay, I should have wanted more space than any magazine could possibly have given me.

I am sorry I do not know more of the *sikidy* practice on the coast. From the little I know I should conclude that it is not nearly so well developed in most of the coast provinces as in the interior. Perhaps, however, *Maititánana* may be an exception; for this is the country of the *Antaimóro*, who seem formerly to have been more connected with the Arabs than were any other tribes in Madagascar, with the exception perhaps of their neighbours to the south as far as Fort Dauphin, who, according to Flacourt, for centuries have had much to do with the Arabs, who also had taught them geomancy, astrology, and the *sikidy*. I am therefore particularly sorry that I have not been able to procure any information about the *sikidy* practice amongst these tribes (*Antaimoro* and *Antanòsy*).

An intelligent native at Tamatave, who read and translated part of my former article on *sikidy* to some other natives there (*Bétsimisáraka*, I presume), writes me that they explained to him that besides the more systematic kind of *sikidy* treated of in my article (*Sikidy Alánana*), they were acquainted with no less than six other kinds, viz. :—

(1) *Joria* (very common, they say); (2) *Sikidy Aldnam-pòza* (common amongst the *Sakaláva*); (3) *Sikidy Alakarabo*; (4) *Sikidy Kofàfa*; (5) *Sikidy Véro*; and (6) *Sikidy Tèndrifàsika*.\* These are all said to be much simpler than the ordinary *sikidy*; but in the short description he gives of some of them I am unable to see any clear theory. *Joria* is said to have only two rubrics (columns or rows). *Sikidy Alakarabo* has also only two rubrics, but these are filled in a manner different from what is used in ordinary *sikidy*; for the *mpisikidy* takes out three and three of the beans he has taken into his hand, and if the last beans left in his hand are three, he puts three into the square to be filled; if two, he puts two; if only one, he puts one. The *Sikidy Kofàfa* and *Véro* can—as my native also remarks—scarcely be called a *sikidy* at all. The procedure is simply the following: You take an indefinite number of

\* I may add that they also speak of *Sikidyin-andròvy*, as a kind of simplified *sikidy*.



short pieces of *kofafa* or *vero* (*vero* is a tall grass, *kofafa* a broom made of grass stalks), in your hand, and you then take out two and two until you have only one or two left. But you must have settled in your own mind at the outset whether one left should mean good luck, and two bad luck, or *vice versa*.

Most of us may be acquainted with a similar practice amongst Europeans, but of course only as an amusement. Some pieces of straw of different lengths held in the closed hand are drawn out by different persons in order to see who gets the shortest one. My native helper says that some Malagasy who had seen Europeans do so had not the slightest doubt that they were practising a kind of *sikidy*. When my native friend dissented, they said: "Why are the Europeans here accustomed to leave their own houses a few days before they set out on their journey for Europe, if it is not to practise *sikidy*?" He replied that they did so because they had sold or packed up all their things. "Well," they said, "you are a young man yet and do not understand it better."

There is another kind of *sikidy* (if we like to call it so) which I have been told has been practised by an old woman here in town. Something had been stolen, and nobody knew the thief, but they suspected he was to be found among the servants. So the old woman said: "Look here, I will show you who has stolen it. Let each of you bring me a little piece of wood." This being done, she cut all the pieces exactly to the same length, gave them back to them, and said: "After a little while you all bring me your pieces, and you will see that the one belonging to the thief will have become a little longer than the rest." But when they brought their pieces, lo! one of them had become a little shorter than the rest; for the man who was conscious of being guilty had thought it best to secure himself by cutting off a little of his piece, which was exactly what the sly old woman had calculated would take place.\* So the thief was found out. This was smartly done, but I do not think it can be a very common practice; for if so, it would become known, and consequently be useless. For ordinary cases of this kind the *Ati-pàko*,† so much in use here, would work better.‡

L. DAHLE.

(On account of the demands on our space, we are obliged to defer the concluding portion of Mr. Dahle's paper, on "*Vintana and San-andro*," to our next Number.—EDS.)

\* A similar practice is found among Oriental peoples; see an exactly parallel account to the above in Rev. Dr. Thomson's *The Land and the Book*, 1883 ed., p. 153.—EDS.

† "ATI-PAKO, s. [FAKO, sweepings.] A mode of recovering stolen property without detecting the thief; all the servants or employees are required to bring something, as a small bundle of grass, etc., and to put it in a general heap; this affords an opportunity to the thief of secretly returning the thing stolen."—*Mal.-Eng. Dict.* p. 70.

‡ Readers of this and of Mr. Dahle's previous paper on *Sikidy* will be amused to hear that from the perusal of the paper in last year's ANNUAL, a old friend of mine and occasional contributor to the ANNUAL, Mr. C. Staniland Wake, has contrived a parlour game which he calls "The Game of Skiddy," to be "played with boards of 8 squares, markers, counters, and dice." He has kindly sent me a copy of the Rules of this game, which may be had, I believe, from the author, Clevedon, Westbourne Avenue, Hull.—J.S. (ED.)

## HOW WE GOT TO MADAGASCAR :

## A VOYAGE FROM PORT LOUIS TO MANANJARA.

“**L**OOSE your sails, for the pilot will be on board in a few minutes.” Such were the instructions which, as I stood on the deck of the *Sophia*, I heard given to the first mate of that vessel, on the morning of Tuesday, 27th July 1886. Soon after 10 o'clock the pilot came on board, and having completed the necessary preliminary arrangements for starting the vessel, he shouted to a man who was waiting for the command, “Let go your hawser,” when, with a gentle breeze, the *Sophia* dipped her flag three times, the seaman's professional way of saying “Good bye” when starting on a voyage.

The distance from Port Louis to Mananjara is about 500 miles, and our thoughts on leaving the harbour were that perhaps on Friday, but at the latest on Saturday, we should land at the port for which we were bound. We were, however, to find that the doings of our little bark could not be calculated with the accuracy with which we had been able to forecast the runs of the Castle Mail Packets *Garth* and *Duart*, in the former of which we had come from England to Cape Town, and in the latter, from Cape Town to Port Louis.

During Thursday we were almost becalmed off Réunion, but, once away from that island, the wind favoured us, and at 9 o'clock on Saturday evening, the captain estimated that we could not be more than about 25 miles from the land; and fearing to approach nearer in the night to a coast which he was now making for the first time, where coral reefs abound, and where there are no lighthouses, he ordered the vessel to be put “about,” and for four hours the *Sophia* retraced her course, when she was again ‘bouted,’ and her bow put for the land. The morning of Sunday was cloudy and rainy, and no land could be seen when I went on deck at 6 o'clock. At noon the sun was obscured, and no observation could be taken, and it was late in the afternoon before the weather cleared; even then, however, land was not in sight. On Monday morning it was seen on the distant horizon, and the captain greeted me by saying jocularly, “Here we are, somewhere off the coast of Madagascar.” Our hopes were raised, and we confidently assured ourselves that e'er the sun set we should be at anchor off Mananjara, if not on shore there. Alas! we were sadly disappointed, for neither that day, nor the next, nor the day after, nor indeed for sixteen days from that morning of bright hopes, did we see the port for which we were bound. A gentle breeze carried us slowly onward toward the land till, at noon, the captain took his observation, when, to his surprise and to our intense disappointment, he found that his “somewhere” of the morning was 75 miles to the south of Mananjara!

The order, “To the north,” was immediately given; and the wind being favourable, we tried to believe that, after all, the mistake would not prove a very serious affair. During Monday afternoon and night we did

so well that, "reckoning by the log," we were said, on Tuesday morning, to be only some 15 miles from our destination. The day unfortunately proved cloudy and wet, and for the second time no observation could be taken at noon; and although we kept pretty close to the shore, no Mananjara could be descried before the sun went down. For fear of passing it during the night, if we continued to go north, the vessel was kept "on and off" till the morning; then, however, things grew worse rather than better, for from early dawn till evening it rained without intermission, and again no observation could be taken at noon. No one knew our actual position, so till 12 o'clock on Thursday, the *Sophia* took short trips—now a little way to the north, and then back to the south, the captain hoping thus neither to lose nor gain until he could make sure of his position. On Thursday the weather was fine and the sky clear, and a good observation was obtained at noon, when it was found that we were 88 miles to the south of Mananjara, or 13 miles further to the wrong than we were discovered to have been on the Monday when we first made the land! The blame was laid to the current, which the captain had been informed set to the north, but which he now discovered set strong to the south.

Again, "To the north," was the order of the day; but now the breeze was not so good as when the first mistake was discovered, and during the next 24 hours we did only 33 miles, still leaving 55 between us and Mananjara. At this stage of the voyage we were becalmed for a short time, but the monotony of the calm was soon relieved by a strong breeze from the north-east, which effectually prevented any progress being made in the direction in which we wished to go. This continued for forty-eight hours, with the result that on Sunday at noon we were declared to be 101 miles to the south of Mananjara; in addition to which we had gone away from the land and were "somewhere" to the east of Madagascar. During the Friday night our troubles had nearly reached their climax, for the darkness concealed the proximity in which the vessel was at one time to the shore; and the captain coming to me on Saturday said, "We were very close to the reef last night, only about a ship's length from it!"

The N.E. wind sank into another calm, which continued till we "turned in" on Sunday night; but on Monday morning, it was our joy to find a breeze from the south filling the sails, and the land again in sight. The observation at noon, however, showed that we had not made any progress, but that we were further to the south than ever. On Tuesday the N.E. wind again set in, and our latitude at noon was 24 degrees south, another 59 miles being thus added to our distance from Mananjara. We had now been out fourteen days!

On Wednesday hope revived in our hearts. A strong S.E. breeze had set in during the night, and on going on deck I found our bark with all sails set and filled, and that we were running to the north at the rate of eight knots an hour. With some variation in its strength, this breeze continued for 24 hours, enabling the captain to say, "I have made my latitude now, at any rate." Of course this was only a guess "by the log," but the log does not tell the absolute truth, and the sun had to be waited for at noon to confirm the estimate, or to show how much it

as wrong. How anxiously we looked at the heavens as noon drew near! How sincere was the language of our hearts that the sky might be clear! It had been cloudy, with occasional squalls, since sunrise, and as 12 o'clock approached, alas! the clouds thickened, and once more the captain was unable to "get the sun." About 2 o'clock in the afternoon, however, land was sighted; and a high hill standing out prominently in the landscape led to the conclusion that the log had perhaps given a correct estimate of the distance we had run, as such a hill stands about 10 miles inland to the S.W. of Mananjara. Now, unfortunately, the wind, which had been dying since the morning, gave its last expiring breath and left us in a dead calm; the sun set before any objects could be distinguished on the shore, and we had to pass another night without really knowing our position, except that we were near to a dangerous coast, and that there were ugly coral reefs ahead, the spray from the sea reaking on which we had seen as the sun set behind the mountains far away in the west.

Thursday morning was beautifully bright and clear, but we were still alarmed. As soon as the captain had taken his observation and finished his calculations, he came to me and said, "You were right." The "right" referred to an opinion which I had expressed earlier in the day, that we were still some 20 miles to the south of Mananjara, which had formed from the position of our vessel in relation to the hill which stood out so prominently as we neared the land on the previous afternoon. Yes; we were still 21 miles to the south of Mananjara and bewildered! Should the wind rise, from what quarter would it come? If from the south, or from the east, or from the west, we could reach our destination in a few hours, but if from the north, it might yet be many days. We waited for the first breath of air, and watched for the first ripple on the ocean. The breath came, and the ripple appeared, soon followed by little white-crested waves. The wind had risen, but it was from the north!

Our only chance of getting up to Mananjara was by making a long tack, so, steering close by the wind, away we went till 10 o'clock at night, when we were some 40 miles out at sea. We then turned, and the head of the *Sophia* once more pointed towards Madagascar. By noon on Saturday (Aug. 14th) we were back within a few miles of the shore, but found that instead of gaining by the tack we had lost 19 miles, being at much further to the south than we were at noon the day before. I asked for an explanation of the ugly fact, and was told that it was the current. I suggested anchoring and waiting till the wind changed, and argued with the captain that there could be no greater risk in doing so than that part of the coast where we found ourselves to be than off Mananjara, since one spot is as much exposed as the other; but my suggestion found no favour in his professional eyes. The vessel was ordered "About," and by 4 o'clock p.m. we were again out of sight of land, with our course as due east as if we had been bound for Mauritius instead of Madagascar.

The aspect of things was getting serious, and whether the provisions would last for the indefinite time which seemed to be before us became a practical question of some moment. It was satisfactory to learn that

of ship biscuit and salt beef and pork there was a supply sufficient for three months. Whatever else, therefore, might be before us, we should not die of starvation; and, with the appetite sufficiently keen, we might come to relish even hard biscuit and the sailors' 'junk.' We were already undergoing a training calculated to lead to that issue. The *Sophia* was not a passenger vessel; she had no accommodation for passengers and made but small provision for the wants of those she took from Port Louis. No fresh or tinned meats or any kind of poultry was laid in, even for those of us who by courtesy were styled 'cabin passengers;' so, even from the first, the cook did not indulge us with luxuries or cause us to fare sumptuously. Out of the limited means at his disposal he provided for us two meals a day, to the latter of which, served about sunset, he was wont to call us by saying, "You take some breakfast?" He was a good-hearted Swedish youth, with only an imperfect knowledge of English. The dish upon which he most frequently exercised his culinary skill was a stew of cabbage, onions, and potatoes, with just a flavouring of salt meat, and this generally appeared at both the morning and evening meal. With cabbage we were supplied in excess from the beginning till the close of the voyage, leading a fellow-passenger to remark, "I have cabbage two times a day for twenty-one days. I no want cabbage any more for six months."

The breeze which took us away from the land was succeeded by a calm which lasted forty hours, but on Monday evening a fair wind sprung up; and just as the sun was setting on Tuesday we sighted land again, but it was still far away on the western horizon. The captain was confident that he was all right this time; and although he could hardly expect to make the port in the night, having no lights on shore to guide him, he decided to continue his course forward, and said that he should anchor off whatever part of the coast he might happen to make, and there wait till the morning revealed the exact position. Accordingly, forward we went with a capital breeze. At 8 o'clock the moon rose in an unclouded sky, and by 9 o'clock it was evident that the land was pretty near. Soon a light was distinguished, and close observation discovered that it was from a vessel ahead of us. We went cautiously toward it, in the meantime shortening sail and preparing to cast anchor. The vessel ahead was evidently one riding at anchor, so it was certain that at last we had made some port. Gradually we came to a convenient distance from her, when the order rang out, "Let go the anchor," and the music of the chain running out gladdened our ears. We were at anchor, but where? We could not be certain. It was about 10 o'clock at night, and we were too far out in the open roadstead to distinguish any objects on the shore. We went below and lay down, asking ourselves, "Is it Mananjara? or Mahela? or some other port?" The morning removed all uncertainty. At daybreak the captain sent a boat to the *Planter*, the ship we found at anchor; and a note was brought back in which was written, "This is Mananjara."

J. PEARSE.



## M. GRANDIDIER'S SCIENTIFIC RESEARCHES IN MADAGASCAR.

### PART I.—GEOGRAPHICAL.

INTRODUCTORY NOTE.—There are probably very few people who take any interest in this great island who are not acquainted with the name of J. Alfred Grandidier, or who have not heard of his travels and scientific researches in this country. This illustrious French naturalist and avant has done more than any previous traveller to make Madagascar known to science; and to him we owe the first accurate mapping of the country as a whole, and the first correct sketch of its physical geography.\* In various departments of natural history also M. Grandidier has made valuable additions to what was previously known of the fauna of the island; while in his magnificent work upon Madagascar in thirty volumes, his *magnum opus*, still in process of publication, he will probably gather up everything of value in various branches of research which has been collected not only by himself but by numerous other labourers in the same field. M. Grandidier has already made known in various French scientific periodicals and in some smaller separate publications the principal results of his discoveries; and as these are summarised in a brochure entitled *Notice sur les Travaux Scientifiques de M. Alfred Grandidier* (Paris: 1884; pp. 54), I have thought that a translation, slightly compressed, of this pamphlet would be of great interest to many readers of the ANNUAL. It should be said that M. Grandidier had, previous to his visits to this country, also made scientific explorations in South America, in British India, and on the east coast of Africa, and these are briefly noticed in the pamphlet referred to; but the principal part of it (about nine-tenths of the whole) is devoted to Madagascar, with which country M. Grandidier's fame as a scientific explorer will doubtless be chiefly connected in all time to come.

The account is divided into (1) A General Sketch of Journeys in the Country; (2) Geographical Labours; (3) Meteorological and Magnetic Observations; and (4) A Study of the Geology and Natural Productions of Madagascar, including its Ethnology. Of these, the third is included in a single paragraph. Space will not allow us to give a translation of the whole in the present article; the third and fourth sections must be reserved for our next number. I will only add that I have M. Grandidier's kind permission to translate and reproduce for the ANNUAL this article, as well as other pamphlets of his in the French language.—J.S.

GENERAL SKETCH OF JOURNEYS IN MADAGASCAR. After a few paragraphs describing his researches in other parts of the world, con-

\* It must not, however, be supposed that even M. Grandidier has traversed the whole land. Large tracts of the interior have not yet been crossed either by him or by any other European; and in some directions journeys have subsequently been made both by English, French, and German travellers over ground which M. Grandidier did not approach.

cluding with the coast of East Africa, where his health suffered much from the climate, M. Grandidier says:—My health growing worse, I was glad, after a long period of expectation, to be able to go to the island of Réunion, where I remained during the close of the year 1864 and the beginning of 1865. But I was unwilling to quit that part of the world without casting a glance at Madagascar; and the few months I passed on the east coast in 1865 showed me that this island, upon which so much has been written, and which, on the faith of hundreds of books published about it, I had believed to be sufficiently well known, if not in all its details, at least in its general features, was on the contrary a veritable *terra incognita*. Various insurmountable obstacles in fact had up to that time prevented all scientific exploration of the interior of the island; and so one could hardly be surprised if the works published by different authors do not merit all the confidence one is accustomed to place in them. Out of all those treating of the island which were available at that time, the only ones which could be consulted with profit were the *Histoire de Madagascar* by Flacourt; the *History of Madagascar* by Mr. Ellis (which, however, is only a history of the Hova people, and which, in the midst of interesting and reliable chapters, contains at the same time many errors); and the *Documents sur la Côte occidentale* by M. Guillain.

As for M. Leguevel de Lacombe, who relates with all their most minute details his travels across the island both from north to south and from east to west, and whose fantastic assertions have been accepted by geographers without question—he has presented, as a veracious narrative, a romance drawn only from his own imagination.

Besides the narratives of different persons who have traversed, and always by the same route, the 98 miles which separate Andôvoranto from Antananarivo, there was nothing, up to the date of my journeys, from which to construct a chart of the interior of Madagascar, except the absolutely false statements of M. Leguevel de Lacombe; and it is no exaggeration to say that everything still remained to be done from a topographical point of view. On the other hand, the fauna and flora, which offer such new and strange forms, had only been studied on some points of the coast and in the neighbourhood of Antananarivo; there must therefore be many discoveries for any traveller happy enough to be able to traverse the island throughout its whole extent. There were also curious and important investigations to be made with regard to the races which have accumulated and intermingled in this corner of the earth.

It was in 1865 that I made my first voyage to Madagascar; I landed at Point Larrée, opposite the little French colony of Ste. Marie. I was not ignorant of the fact that the people of Imérina had always been opposed to foreigners travelling in the interior of the island; but, confident in the experience gained by contact with numerous savage tribes among I had so often been on good terms during my previous travels, I reckoned upon being able to baffle the watchfulness of the chiefs and to penetrate into the very heart of the country.

I had chosen the north-east coast of Madagascar as the point of departure for my explorations, with the double object of avoiding the already well-known route from Tamatave to Antananarivo, and of not calling the attention of the Government to myself and my researches. Notwith-

standing all my efforts, I was the object of constant surveillance by the governor of the province of Ivôngo; I could not get away from the coast or give myself up to any topographical work; so, returning to Ste. Marie, I took the French government schooner and repaired to Antongil Bay. There, however, the same difficulties met me. But the time was not entirely wasted; I turned it to some account by studying the fauna, the flora, the language, and the customs of that part of the island, and by getting a footing into the country. Such preliminary investigations are indispensable in order to travel with profit and in safety, so as not to overload one's baggage with useless collections, and, above all, to avoid the dangers which always accompany the want of knowledge of the people with whom one ought to be on good terms.

The few favourable results of this first exploration led me to turn my attention to other portions of Madagascar for my next journey, and I chose the southern region. The countries of the Antandroy, the Mâhafaly, and the Sakalava, which are situated to the south and west of the island, are with justice considered as dangerous from the rapacious and savage character of the inhabitants; but they are independent of the Hova, and I hoped that there I should not encounter the same difficulties as in the east. Besides this, no geographer or naturalist\* had visited those regions. I embarked on the 6th of June 1866, at Saint Denis, on board the three-masted barque *l'Infatigable*, one of four ships which for some years past have run the risks of trading between Fort Dauphin and the entrance to Môrondava; on the 11th, we cast anchor opposite Cape St. Mary. This was the first year that ships dared venture to anchor near this arid coast. A line of sand dunes destitute of vegetation; reefs of rock which stretch level with the water for a great distance from the shore and are continually beaten by the waves of a stormy sea; no trace of human habitation—there seems nothing in short which could attract ships towards this desolate country, where landing is most difficult on account of the constant and heavy surf.

The *Infatigable*, at great risk, came to endeavour to collect a cargo of 'orseille,' a lichen useful for dyeing, which forms the principal wealth of the south and the south-west coasts of Madagascar, and which grows abundantly on the bark of the spiny and stunted shrubs characteristic of these deserts. A stay among the Antandroy who inhabit this country is somewhat risky, for they are continually at war with each other; and the abject want of these poor creatures, who have lived for centuries in misery and destitute of the necessities of life, is really incredible.

From Cape St. Mary I repaired to Mâsikôra, then to Tolla. My excursion into the country of the emigrant Antanôsy from the latter place enabled me to ascertain to what geological formation the south-west region of Madagascar belongs. The Nerinean and other fossils characteristic of the Jurassic limestone, which I collected there, prove the existence of Secondary strata, which cover a vast extent of surface and rest upon a thin bed of Nummulitic rock. Being not unaware of the numberless difficulties which were sure to impede my researches amongst a cruel and superstitious population, and of the dangers which

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\* M. Peters, and he only, had passed a few days in the harbour of Tolia,



I must encounter in a country where, during the last twenty years, several ships had been pillaged and their crews massacred, I had only designed, in this preliminary exploration, to prepare the way for another journey later on. I only took with me the most slender amount of baggage: a little sextant with its artificial horizon, a barometer, some thermometers and scalpels. It was only hastily and by stealth that I was able to make some meridional observations.

After this second journey, I returned to France to obtain all the necessary appliances for the work which I purposed undertaking. The Minister of Marine gave me a number of valuable instruments for scientific observations, and all the apparatus required for the measurement of crania, etc., and also for the preparation of natural history specimens.

It was on the 9th of November 1867 that, charged afresh with a scientific mission, I left Paris. I first visited the south-east coast of Madagascar and touched at Yavibôla, a little port which is now and then visited by some coasting vessels from the island of Réunion. During this voyage I proved that the names of the rivers situated between Fârafângana and Fort Dauphin, between the 23rd and the 25th parallels, were wrongly placed on the maps, and these I have rectified.

From Yavibola I went direct to Tolia, a town which became for some months the centre of my operations. My first care was to pay a visit to the king of Fiherenana, Lâhimerisa, whom I had become acquainted with on my previous journey, and with whom I had become a 'brother by blood' (by the *fâti-dra*). I knew that the Sakalava had attributed to me in 1866 the not very enviable reputation of being a sorcerer; and I wished, from the period of my arrival, to attach the king to my interests by means of presents. I well remembered that I had, during my stay in the kingdom of Fiherenana, heard of many *kabdry* or proclamations for the prevention of sorcery, and it was only by means of the royal protection that I was able to set off safe and sound. No accusation in the barbarous districts which are independent of the Hova is more dangerous than that of sorcery; if the pretended crime is proved, immediate death is the punishment of the culprit. I do not know a people more stupidly superstitious than the Malagasy. With the Sakalava, in common with the other tribes, nothing happens naturally: good or ill fortune, all is due to fate and to talismans. What vexation and weariness have not the inhabitants of the west coast daily caused me on account of the absurd fears which they manifest against sorcerers. Now every one is a sorcerer who distinguishes himself from other people by his actions or his words; and the traveller who passes his time in collecting information, in writing, in observing the stars, in "talking with the good God," as they say in their picturesque idiom, or in managing a crowd of instruments each more extraordinary than the other, and in collecting the skins of animals and putting reptiles into spirits—is naturally in their eyes one of those monsters one cannot fear enough, and against whom it is well to take every precaution. I was acquainted with their habits and their laws, and I lived their kind of life; I had won over to myself, or rather, I had bought, the good will of the chiefs and of the people; although I could never tell what difficulties I might

experience in pursuing my studies, or what insurmountable obstacles might prevent me from attaining the objects which I meanwhile perseveringly pursued. If self-interest had not been the most powerful motive for their actions, I should certainly have been reduced to the most complete helplessness.

The king's village is situated on the bank of the River Manómbó; it was on returning to Tolia that I had the happiness to discover, at Ambòlintsátrana, an extensive bed of fossil bones, amongst which I have found a new species of Hippopotamus, almost all the fragments of the foot of the colossal bird the *Æpyornis*, and two gigantic Tortoises.

While staying at Tolia I occupied myself with mapping a chart of St. Augustine's Bay. By the help of the speed of the propagation of sound I obtained a base of more than 13 miles, and I immediately commenced a hydrographical survey of the River Anoláhina or St. Augustine. Unfortunately, at Sàlobé, at the very time when, coming safe and sound from the hands of the Mahafaly and arriving among a friendly people, and believing that I should have no more difficulties to encounter for the remainder of my journey, I was altogether stopped by the war which unexpectedly broke out in October 1868 between the Antanosy and the Bara.

The emigrant Antanosy were, of all the inhabitants of the southern region, the only ones amongst whom I could find porters for the scientific instruments which I took with me, and upon whom I could reckon to accompany me as far as the east coast; but now, not only were all the able-bodied men obliged to take part in the daily fighting, but their enemies stopped up the route which I should have taken. The Antandroy, the Mahafaly, and the Bara are tribes addicted to plunder, to theft, and to murder; to put myself into their hands with my barter goods and my instruments would have been to sign my death-warrant. I speak thus from experience, having been plundered by the Mahafaly, and having extricated myself from their hands not without difficulty and danger. After some weeks of waiting among the Antanosy, and no change in the state of affairs taking place, while fever had much weakened me, I was obliged to resign myself to returning to Tolia, where I could find some assistance. Thus ended the first attempt which I made to traverse the island from west to east.

It was only after a rather long convalescence that I was able to resume my topographical work. First of all I visited the great salt lake of Tsimánampetsótsa, which is situated six miles from the Mahafaly coast, and a little south of the 24th parallel. The country is so dangerous that I dared not risk myself with my instruments, or with any other object which could tempt the cupidity of the natives or awaken their superstitious fears. It was only by a rapid reconnaissance that I could go so far as to assure myself of the existence of this lake, which I had often heard spoken of. I then undertook the hydrography of the River Fihérénana. But persecution recommenced, and the chiefs of the country stopped my labours at about 15 miles from the coast. I could do nothing more on these inhospitable shores, where, notwithstanding well-tried patience and continual attempts, my position became every day less tenable; so I left St. Augustine's Bay in the month of February 1869 and set off for Ménabé.

The rainy season had now set in, and at that time of the year travelling becomes impossible. Clouds of mosquitoes and of wasps invade the west coast, and the overflowing of the rivers renders the roads impassable. I stayed during the winter\* at the village of Ambondro, which is situated at the mouth of the Môrondava; and I profited by the time there spent by completing my collections. When I was able to recommence my geographical labours, I endeavoured to survey the courses of the Tsijobônina or Manla and of the Mánambólo; but I was not allowed to ascend these two rivers for more than 20 miles from the sea. Notwithstanding the presents which I distributed liberally to the Sakalava king Toëra and his chiefs, I could not get beyond this limit. Advancing further north I experienced still greater difficulties; and it was completely impossible for me to penetrate into the interior of the territories of the Timahslaka, the Timarâha, and the Timilânja, three petty independent Sakalava tribes which live between Cape St. Andrew and 18° 20' of south latitude. My reputation as a dangerous sorcerer had preceded me in these regions; and I was also the object of the hostility of the Arab slave-traders, who carry on the trade there and cherish intense hatred to Europeans. After troubles of all kinds I was obliged to resign myself to departure from these shores and to leave for Nôsihé. I was, however, able at the same time to cast a passing glance over this unknown coast, and to collect some documents which are not without interest; I also fixed astronomically the principal points.

From Nosibe I went to Mojangà, from whence I at length succeeded in going up to the Hova capital. My journey lasted twenty-six days. I very much wished to take this route, which no European had up to that time travelled by, because it does not lie far apart from the course of one of the principal rivers of Madagascar, the Bêtsibóka; and I had often been told that one could ascend it in a canoe almost up to Antananarivo; so I thought, on the faith of this information, that perhaps it would not be a bad thing for me to open up from this side of the island a sure and easy way of communication between the coast and the central province of Imerina. But I convinced myself that the Betsiboka is not navigable beyond its junction with the Ikiopa.†

The route which leads from Mojangà to Antananarivo passes over the most desolate, sterile, and desert region that can be imagined. One travels first for about seven days and a half across plains of the Secondary formation, which are dry and covered with scrubby vegetation and, here and there, with dwarf palms. From these we come to the grand granitic‡ elevated mass, which extends from the 22nd degree of south latitude as far as Pâsandáva Bay; here one finds for thirteen or fourteen days nothing but a sea of mountains without a tree, except for a few patches of wood in the ravines, and with no plant except coarse grass. This country is not, and cannot be, populated. The city of Antanana-

\* M. Grandidier here uses the word 'hiver' for the season we generally call the 'summer' in these southern latitudes.—J.S.

† It is, however, navigable for large canoes higher up than this point, in fact as far as Mèvanàna.—J.S.

‡ More accurately, as Mr. Baron has shown (ANNUAL X., p. 60), of Primary Metamorphic rocks, gneiss, mica-schist, etc., as well as granite.—J.S.

rivo is situated to the east of a vast circular area, the Bêtsimitàtatra plain, which is admirably cultivated with rice and is extraordinarily populous. This plain, over which low hills are scattered, is the bed of an ancient dried-up lake, and measures about 16 miles long by about 15 miles wide.

Thanks to the Prime Minister, Rainilaiárvóny, I was able to make a map of the province of Imerina, which is inhabited by the Hova, and of which Antananarivo is the capital; the base-line for this, obtained by astronomical observations, measures about 33 miles. I chose, for the extremities of this base-line, two mountains situated almost on the same meridian, one of which, 8250 feet high, is the highest point of the island and commands a view over the whole province,

Leaving Antananarivo I went to the Ankay plain, which I followed as far as the sources of the Mangôro, the largest of the rivers of the east coast; then, crossing some hills, I was able to study the great valley occupied by the Sihànaka, where we find the most important lake of Madagascar, the Alaotra, whose existence I was the first European to discover. I returned to the Hova capital across the mountainous region which borders the Ankay plain to the west. This journey lasted for twenty-eight days.

I afterwards left Antananarivo, on the 27th of November, to go to Morondava (Ambondro), on the west coast. I traversed part of the Bêtsiléo country, a more populous region than those I had crossed in coming from Mojangà. Trees are not very common there, and one must often go from three to four days' journey from different villages to procure the wood necessary for building; but the valleys formed by the innumerable torrents which cut the granitic mountains in all directions are somewhat large, so that there rice can be cultivated. The road descends first directly south for about 90 miles, then it turns towards the west; I passed the Hova forts of Etrémo, Ambôhinômy and Janjina. There ends that sea of mountains which I had not left since getting to the fort of Antôngodrahôja. On leaving Janjina we enter a Secondary plain 84 miles in length, divided at about  $42^{\circ}38'$  of east longitude by a very straight chain of hills, which appears to stretch from north to south nearly throughout the whole island. On the 20th of December I arrived at the mouth of the Morondava, where I stayed the winter [the rainy season]. We had travelled toward the west for 150 miles.

On the 15th of March 1870 I left Ambondro; the fine season had returned, and I sailed in an outrigger canoe to the mouth of the little river Maitampàka to Matséroka, from whence I reached the Hova fort of Mânja, which is the most southern point which the Hova actually hold in the Sakalava country. This part of the island is thinly peopled and rather dangerous to travel in: every day the *jirika* or highway robbers come and make raids to carry off cattle and people. About the time of my passing through it, a thousand independent Sakalava had attacked a convoy of 1500 oxen escorted by 50 Hova soldiers and some officers; all the animals were carried off, six soldiers and an officer of the 12th honour (a general) were killed, and the rest of the company were made slaves. Having happily escaped a similar fate, I was able to traverse the Betsileo country through its whole extent, and I visited

its capital, Fianarantsoa, which is, on account of its population and its trade, the second town in Madagascar, and to which no European had up to that time penetrated.\* Then I proceeded, always across an uninterrupted mass of mountains, to Mananjara, one of the principal ports of the west coast. This part of the country, crossed here and there by forests, is more fertile than the regions which I had previously passed through. This journey lasted twenty-nine days, from the west to the east coast.

My researches into the history of the country and the immigration of foreign races into the island led me to go to Matitanana, where there are still to be found the descendants of the Arabs who emigrated to Madagascar in ancient times. I collected numerous documents relating to this curious tribe, and I made extracts from books written in Arabic characters, which they preserve with religious care. My journey along the east coast enabled me to correct the position of the mouths of the rivers and of the ports which were omitted, wrongly placed, or misnamed, from Matitanana as far as beyond Antongil Bay.

From Mahanoro I went up to Antananarivo, always across rugged mountains, but through a country comparatively fertile. I had at this time the happiness to be able to observe, on the day following my arrival, two occultations of stars by the moon, so that I fixed the latitude of the Capital. My researches among the Hova and in the province of Imerina were now completed; I went down to Andovoranto by the ordinary route and reached Tamatave, then went to Point Larrée to complete my latest work, the survey of the coast which I had traversed in 1865. I then set off for France, where I arrived at the close of 1870. Since that period I have worked at the preparation and publication of my *Histoire de Madagascar*, of which six volumes have already appeared, and which will comprise thirty volumes.

I shall now proceed to make a short analysis of the scientific work which I have accomplished in the various explorations the itineraries of which I have just briefly sketched. The work I have carried out in Madagascar from 1865 to 1870 has had reference to the geography of the island, to its climate, and to its natural productions. We shall divide it therefore into three sections.

I.—GEOGRAPHICAL RESEARCHES. It is an admitted fact that a traveller cannot carry out *geodetic* operations, such as the measurement of arcs of the meridian or of parallels, in order to determine the form of the Earth. He can only make known the regions he explores from a *topographical* point of view, by ascertaining its natural divisions, its contour, the distribution of its waters and its forests, the position of its villages, in short, the preparation of a map. But the map of an uncivilised country cannot, except under unusual circumstances, comprise all the details which are required in a map of large scale, or even in one of medium scale; it should, however, represent the main outlines in a clear and precise fashion, and give the general and characteristic

\* M. Grandidier is mistaken in this statement. A year and a half before his visit, in September 1868, Fianarantsoa and the principal towns in the Betsileo province were visited by the Rev. T. Campbell, of the Church Missionary Society; see *Church Missionary Intelligencer*, June 1869.—J.S.

features of the country. In civilised countries, where industry is well developed, there is a tendency, and with good reason, to give a continually increasing scale to maps; so that engineers and soldiers, scientific students, and even agriculturists, may be able to use them in their various pursuits, so that they need not be obliged to collect upon the spot the information which they need for each particular undertaking. But the time and expense which a similar work would entail in uncivilised or barbarous countries would not be commensurate with the uses such maps could serve; and besides, the traveller being generally alone in his most distant explorations, if he devoted himself to a survey showing all the details of the soil, could only give, after years of labour, a map of a very limited region instead of a general outline, which in the first instance will be of more service to science and for colonisation. The methods of survey ought indeed always to have a degree of exactitude proportionate to the importance of the country surveyed. So that on my journeys I have not attempted the most minutely exact methods, nor have I used the most delicate instruments, such as are employed in Europe for topographical surveys. I have rather chosen to survey in a rapid and less expensive style (such as M. d'Abbadie has employed with so much success in Ethiopia) all the prominent summits and the principal villages and streams, which, laid down on the map, serve as fixed points between which other details of the region have been added, some taken with a graduated circle, and others simply from sight. In short, in these expeditions it has been my chief aim to observe not with minute precision, but rapidly and broadly, because I could not reckon upon the morrow, and I had to contend with difficulties constantly cropping up; and, owing to the superstitions of the natives, I have very often had to take my latitudes or horizon observations hiding myself, as if I was committing a crime.

1.—*Notice sur les Côtes Sud et Sud-ouest de Madagascar\** (*Bulletin de la Société de Géographie de Paris*; Oct. 1867), avec une carte. All authors have spoken of the incomparable fertility of the soil of Madagascar and of the beautiful vegetation of its mountains; and certainly their descriptions have not been without influence upon those attempts at conquest which have been made at different times. But such a pleasing picture does not at all agree with the condition of an immense extent of country in the southern region, which, up to the time of my journey in 1866, remained unexplored. I have in fact proved that, contrary to what has been said about it, all the space comprised between the sea on one side, and the 22nd degree of south latitude and the 44th degree of east longitude on the other side, is only a vast arid plateau, of which the mean height does not much exceed from 300 to 600 feet above the sea. In these plains, which have an aspect of sadness and desolation quite peculiar to themselves, there are few mountains and few streams.

During this same journey I came to the conclusion that there were numerous errors and omissions in all the maps and charts published up that period. Out of the 41 villages which are found between Point

\* This and the following, in *Italics*, are the titles of the various publications issued by M. Grandidier.—J.S.

Barlow and the mouth of the Morondava, only six were shown; I have determined the position of all the others, most of them astronomically. The rivers there were wrongly marked and wrongly named; some were placed where none existed; others were wanting; and the Mangòky, the third important river in the island, which was made to flow into the sea at Cape St. Vincent, into the bay which the Malagasy call Tsingliffly, and where there is no stream at all, really empties itself 20 miles further north and by two principal mouths, the Fangòro and the Màrolòha. I have corrected all these errors, one of which was very serious from a navigator's point of view. I have also ascertained the existence on this coast of two lakes which were up to that time unknown, the Tsimanampetsotsa and the Héòtry.

2.—*Une Excursion dans la Région Australe chez les Antandroys* (*Bull. Soc. des Sciences et Arts de la Réunion*; 1868). This notice contains the account of my journey in Androy, the southern province of Madagascar, where no other traveller had previously set foot. One gets there the first glimpse of the general aspect of this region (see p. 331).

3.—*Note sur la Côte Sud-est de Madagascar* (*Bull. Soc. Glog.*; 2e sem. 1861). This notice is for the purpose of rectifying the positions of the mouths of the eight principal rivers comprised between  $22^{\circ}56'$  and  $24^{\circ}30'$  of south latitude, rivers which were marked on all the maps with an error of from 10 to 20 miles, and of which I have fixed the exact positions.

4.—*Madagascar* (*Bull. Soc. Glog.*; août 1871), avec une carte. This paper is accompanied by a general map of the island, a map which serves up to the present time as the basis of all those which have been published both in England and Germany and even in Madagascar, and shows the different itineraries of my successive journeys. In the first place, I succeeded in completely crossing the island three times:—(1) from Mojangà to Andovorantò; (2) from Ambondro to Mahanoro; and (3) from Matseroka to Mananjara. Besides these journeys, I penetrated in the south of the island, setting out from Tolia, as far as the country of the emigrant Antanosy. In the centre, I followed the Ankay valley in all its length as far as the very sources of the Mangoro, and I explored the Sihanaka country, where one finds the largest lake in Madagascar, the Alaotra. I made the ascent of the most elevated peaks of the huge mass of Ankàratra, and I visited Lake Itàsy, which is situated in the province of Imerina. In the west I ascended for several miles from the coast the great rivers Mania and Manambolo. It is through these successive journeys that I have been able to fix in an exact manner the principal features of the orography and the hydrography of Madagascar and the very curious distribution of its forests.

Lastly, I have examined more than two-thirds of the coast, from Masikora to Cape St. Andrew and from Bembatoka Bay to Nosibè, on the west; and from Yavibola to Mahanoro and from Andovoranto to Antongil Bay, on the east; and I have added a hundred villages to those which were shown on the eastern coast, 11 on the southern coast, and 50 on the western coast. I have corrected the positions and the names of a large number of streams, rather more than 50 on the east coast and 11 on the west coast.

In the countries of the Sakalava, the Mahafaly and the Antanosy, where, as I have said, they consider as a sorcerer every person who is different from other people, a traveller engaged in scientific researches naturally gives rise to suspicion. In the countries subject to the Hova, where superstition is less and barbarism not so great, the distrust which the inhabitants have always felt for foreigners is an obstacle of another kind, but not less insurmountable. It is then not at all surprising that in the greater number of instances I have not been able to make my observations as complete and exact as I could have desired, nor could I follow the ordinary methods of topographical surveying. More frequently I have been obliged to content myself with fixing by numerous latitudes the position of the most important points of the coast and of my various halting-places in the interior. I have nevertheless always taken care to fix each point by as many series of circum-meridional altitudes as I could possibly take; and I have obtained results quite sufficiently accurate for the map which I am preparing, the probable error of my latitudes not exceeding 200 to 300 mètres.

For the longitudes I have, where at all practicable, had recourse to the procedure, so practicable and so exact, of the occultation of a star by the moon; it was in this way that I determined the longitudes of Antananarivo ( $45^{\circ} 15' 45''$ ), of Tolia ( $41^{\circ} 24' 45''$ ), of Salobe ( $42^{\circ} 24' 45''$ ), and of various points on the west coast, Morondava ( $41^{\circ} 56' 15''$ ) and Sôhazo ( $41^{\circ} 58' 00''$ ), with the probable error of a mile.

All those itineraries which unfortunately I could not survey with the theodolite—whose constant employment would have greatly excited the opposition of the natives and have certainly led them to prevent my advance—have been surveyed with the compass with the greatest care and verified by numerous observations for latitude. These various itineraries amount to a total of more than 1860 miles in the interior, and of 1550 miles along the coast.

Up to that period geographers had shown the mountains of Madagascar at random, just following their own fancy. In fact, all the maps previous to 1871 represent this island as divided from north to south, in the line of its greatest length, into two very nearly equal parts by a great mountain chain, which sends forth ramifications both to east and west, and between which extend large valleys. The watershed is, in the same way, placed very nearly in the centre, and immense forests cover almost the whole surface. *This arrangement of mountains, of streams, and of forests is altogether erroneous.* The island of Madagascar in fact, as my map shows, comprises two very distinct portions: the eastern region, which is entirely mountainous, and the western region, which is flat. The mountain mass, whose base bathes in the Indian Ocean on the east coast and which covers two-thirds of the surface of the island, rises pretty rapidly up to a height of about 5000 feet; from thence it is a sea of mountains whose mean elevation is from 3300 to 4000 feet, and which only leave little narrow valleys between them, with the exception of certain vast circular expanses, the beds of ancient lakes more or less dried up, such as the plains of Betsimitatatra and of Antsihanaka, and the valley of Ankay. As for the 'plateau' which old maps show in the interior of the island, it has no existence, since the



central portions have such an irregular surface that one must often travel a long distance before finding a level plot even of a few acres in extent.\* After a journey of 120 miles across these mountains, one descends by an abrupt slope into the great western plain, which is cut from north to south by two small mountain chains. The streams, as Flacourt had remarked, and contrary to that which most modern maps show, take their rise much nearer the eastern coast than the western; so that the watershed is situated at about a quarter of the way across the island.

Lastly, the forests of Madagascar, as I was the first to point out, have a very peculiar arrangement. A belt, in some places several leagues in breadth and following the coast-line, from which it is not very distant, completely surrounds the island,† to which it forms a kind of girdle. This forest-belt follows, on the east coast, the eastern slopes of the buttresses of the central mass, leaving between itself and the sea low hills and mountains covered with shrubs, herbaceous plants, and patches of wood. Another belt, which is still narrower, stretches parallel with the first one, along the crest of the ridge which forms the watershed. The vast expanse of country which is surrounded by this girdle of forests is devoid of trees, and even of shrubs, in all the mountainous parts, that is to say, over two-thirds of its surface. These mountains and hills are only covered by a coarse grass, which is not even fit for food for the cattle, but is used by the inhabitants as fuel. Over the plains of the west and the south are scattered small patches of wood and isolated trees. One sees that it is far from the truth that there are immense forests almost covering the island, as has been often said. I will add that if we except a few very beautiful plants and trees, which are remarkable for their form and the elegance of their foliage—such as certain palms, the tree-ferns, and several exquisite orchids, which adorn the forest-belts we are speaking of—the larger number of the trees found there have not a very vigorous appearance; their moderate height and their covering of lichens show that the soil from which they spring is of no great depth. The forests of the north-east seem finer than the others.

5.—*Notes sur les Recherches Géographiques dans l'Île de Madagascar (Comptes rendus de l'Académie des Sciences; août 1871).*

6.—*Rapports au Ministre de l'Instruction publique sur une Mission à Madagascar (Archives des Miss. Sci. et Lit.; 2e sér. t. iv. 1867; t. vii. 1872).*

7.—*Excursion chez les Antanosys émigrés (Bull. Soc. Géog.; fév. 1872), avec une carte.* This pamphlet gives details about the country of the Mahafaly and the emigrant Antanosy, whose capital, Salobe, is situated 64 miles from St. Augustine's Bay, and where no other European had until then penetrated. The sketch map of the route which accompanies

\* I think M. Grandidier has here a little exaggerated the irregularity of the surface of the interior mountainous region. The level, or nearly level, portions are more numerous than he supposes; as those will admit who have travelled in Vönizongo, or Anätivôlo, or the valleys of the Mananàra and the Manànta, or the Antsirabè district, or parts of the country on the road to Fianarantsoa, such as the *éfitra*, the district round Ambositra, and other places.—J.S.

† See, however, Mr. Baron's remarks on this point, page 274, *ante*.—J.S.

this pamphlet gives an outline survey of the Anolahina, the most important river of the south-west of Madagascar. The triangulation was prolonged as far as the River Rànomèna, which is situated further north, but the natives would not let me ascend it beyond sixty miles.\*

8.—*Madagascar* (*Bull. Soc. Glog.*; avril 1872, avec une carte). This article, which treats specially of the inhabitants and of the productions of the country, and of which we shall have to speak again further on, is accompanied by a fac-simile of three maps of Madagascar, one of 1858, another of 1863, and my own of 1871, in order to show the important modifications which my explorations have produced in our knowledge of the orography and the hydrography of this island.

9.—*Un Voyage Scientifique à Madagascar* (*Rev. Scient.* 1871). In this paper I have given a compressed account of my geographical labours and a description of the physical geography of the island.

10.—*La Carte de la Province d'Imerina*. Autographiée en quatre couleurs, à 1/200,000; 1880. The province of Imerina, which Europeans formerly wrongly named Ankòva, is situated in the centre of Madagascar; it is the most populous and important of all the provinces, for one must count there at least 1,200,000 inhabitants; and, as the whole island has hardly more than two millions and a half, one sees that it alone includes about half the total population. Imerina is the cradle of the Hova, who, thanks to their superior intelligence, their habits of obedience to discipline, the instruction received from European officers, and also their unusual fecundity, have enjoyed for a century past a preponderant position in Madagascar, under the guidance of Andrianampòinimèrina and Radàma I. So that as it was here a matter of great interest not to rest content with a simple survey by compass, I made every effort to project over its surface a series of triangles. From seven principal summits I took with the theodolite a number of horizontal sights, comprising 357 observations, and I obtained either by the eye or by the Burnier compass the details included in the triangles. I was aided in this last work by a missionary† whose professional duties take him all over this district, and whom I furnished for this purpose with the necessary instruments and instructions. I procured two bases for the astronomical observations by carefully taking the latitude of one of the two most elevated peaks of the Ankaratra mass of mountain, and that of Antananarivo, on one side, and of the mountain Miakòtso, on the other. The centre of my operations was Antananarivo,‡ at the open space called Andohàlo.

The map which is the result of these observations, and of which I published in 1880 a preliminary sketch to the large scale of 1/200,000, serves as the basis of an engraved map which will accompany the volume on the geography of Madagascar I am now preparing. It comprises an extent of country of about 90 miles by 76, with an area of about 6800 miles; on it are shown the positions of about 800 summits, of which 550 are named, and of a thousand villages and hamlets, of which 568 have their names given.

\* Salobe, lat. south 23° 31' 23"; Tolia, lat. south 23° 21' 21". † Rev. Père Roblet. ‡ Lat. south 18° 55' 4"; long. east (Paris) 45° 15' 45."

11.—*La Province d'Imerina* (*Bull. Soc. G  g.*; 2me trim. 1883, avec une carte hypsom  trique). In this article I have given a general sketch of the province of Imerina, of which I have spoken in the preceding section, both from the point of view of its physical aspects, as well as with regard to its political divisions and its inhabitants. A hypsometrical map, to the scale of 1/500,000, with circles each distant from the other 100 m  tres, has been prepared by the help of a thousand observations of altitude taken both by myself and P  re Roblet. It shows clearly, by the help of graduated tints, in one part the great mass of Ankaratra, of which the four peaks, Amb  himirandrana (7710 ft.), Ankavitra (8300 ft.), Tsi  fak  fo (8333 ft.), and Tsi  fajavona (8497 ft.), are the highest points of the whole island. In another part is shown the valley of Betsimitatatra, which extends to the west of the Capital, and which is watered by the Ikiopa and its tributaries, the Sisaona, the Andr  mba, the Kitsaoka, the Omabif  tsy, etc. This is, I believe, the first and the only contour map which has made of an uncivilised country on such a large scale. This map enables one to see at a glance the zones of altitude characteristic of this province, which is so mountainous and desolate beyond the great plain to the west of Antananarivo; and it shows clearly the manner in which the waters part themselves.\*

12.—*Les Cartes de Madagascar, depuis les temps les plus recul  s jusqu'   nos jours* (*Comptes Ren. Acad. Sci.*; 3 mars 1884). This paper gives new information both as to the date of the discovery of the island, which took place six years earlier than (up to the present time) has been stated, that is to say, on the 10th of August 1500, instead of the 1st of February 1506, and also as to its identification with the island Menuthias of Ptolemy, the country of Djafuna of Masudi, and the island of Chezbeza of Edrisi.

Here terminates the enumeration of publications of the purely geographical kind which I have issued up to the present time. I have in progress the volume entitled *G  ographie historique, physique et math  matique*, in which are given in detail all my observations, and which will be accompanied by maps on a large scale of all my routes, and of the various parts of the country which I have surveyed with the theodolite. At present the only part which has appeared is that containing facsimiles of ancient maps, to the number of 43, which I have had reproduced with the object of showing the successive phases through which the mapping of Madagascar has passed.†

*Translated from the French of* ALFRED GRANDIDIER.

*By* JAMES SIBBER, JUN. (Ed.)

\* This beautiful and interesting map of Imerina is reproduced in Captain Oliver's recent book *Madagascar*.—J.S.

† Since the above was written, the letter-press of the historical portion of M. Grandidier's great work has been issued, pp. 96, containing an elaborate and minute account of all the features of the coasts of Madagascar. Another geographical pamphlet, not included in the above list, has been published by M. Grandidier, giving an account of the East Coast Lagoons, a translation of which I gave in last year's ANNUAL (No. X. pp. 205-208).—J.S.

## THE AFFINITIES OF MALAGASY WITH THE MELANESIAN LANGUAGES.

WHILE staying in England in 1885, I received, through a friend, a copy of the Rev. Dr. Codrington's new book entitled *The Melanesian Languages*, in exchange for a copy of the *New Malagasy-English Dictionary*; and the editors of the *Annual* have kindly placed a few pages at my disposal for the purpose of calling attention to some of the most striking "affinities" with Malagasy which Dr. Codrington has noted. The reading of this book has been a real pleasure to me; and I am sure all students of the Malagasy language will be interested in the many notable similarities I propose to point out.

At the outset, let me say that I regret that such a thorough investigator as Dr. Codrington should not have had better material to base his comparisons upon, as far as Malagasy is concerned, than Crawford's antiquated list of words, Dr. Parker's (?) *Concise Grammar of the Malagasy Language*, *Outlines of a Grammar of the Malagasy Language*, *Grammaire Malgache*, and a Malagasy Grammar by E. Baker, which Dr. Codrington says (p. 101, note) were the authorities (?) he consulted. For, of these books, the first contains many errors; Dr. Parker's work is a piracy of the Rev. W. E. Cousins's book, and where minor changes have been made they are mostly wrong; M. Marre de Marin and Dr. H. N. Van der Tuuk probably have only a theoretical acquaintance with Malagasy; and the Grammar of Mr. Baker is very antiquated and constructed too much on the model of European grammars. Under these circumstances it cannot be a matter of surprise that Dr. Codrington has fallen into some errors, as far as Malagasy is concerned; my surprise is, however, that they are so few.

"We may demur to some of his statements and views, but the book, upon the whole, is pervaded by a penetrating spirit of research and independence of criticism which is quite refreshing. The author takes nothing for granted, nothing on trust, does not hover over the surface of the phenomena, but strives hard to get to the real root of the matter. Probably some of his statements could have been put in a clearer form. But a pleasant and perspicuous form is not often coupled with deep research and keen critical insight." So writes one of our most profound students of Malagasy, the Rev. L. Dahle, to whom I lent the book, and who carefully read and annotated some parts of it and made many remarks confirming, and in some instances expanding, the notes I had already made in the work in preparation for this article. Mr. Dahle further adds: "That he should make some mistakes in the Malagasy, as pointed out in your notes, was only natural. I found the book to be one after my own heart. It has been quite a treat to me; I have met with no other author whose views with regard to the Oceanic languages have agreed so with my own."

But to turn to the book itself. Pages 36—100 are occupied with vocabularies; seventy words in forty Melanesian languages are given from Mr. A. R. Wallace's list,\* and, for comparison, the corresponding ones in Malay, Malagasy, and the New Zealand Maori. The lists fill fourteen out of the sixty-five pages, and the rest consist of notes on each word, bristling with points of interest to students of Malagasy.

I would call attention first to the spelling of Malagasy words. Dr. Codrington sometimes writes *i* for *y*, and *u* for *o*. We know that in common with most philologists Dr. Codrington objects to our use of *y*, and urges with

\* In *The Malay Archipelago*, vol. ii., pp. 476—501.

others that we never should have adopted the *o* for the *u* sound. Why did not Dr. Codrington adopt the *y* and the *u* throughout? and then we could have seen how such a way would help us in comparisons. We admit that *y* is a mere substitute for *i* at the end of a word, and we could well do without it; and it is true that our use of *o* for *u* is the only case in the Malayo-Polynesian languages where it occurs. We would gladly see the *y* cut out, but the *o* presents a difficulty, inasmuch as many of the tribes outside Imerina give a distinctly open *ɔ* sound for our Hova *o*; and while in Imerina we pronounce *ɔlona* as *ulona*, they say *olona*, as an Englishman unacquainted with Malagasy would also do.

If we were now settling the Malagasy alphabet, I should be inclined to reject *y*, substitute *dz* for *j*, and thus reduce the letters to nineteen instead of twenty-one. We could not well substitute the *u* for *o*, for we should still require the *o* for the interjection. I fear we could not carry the natives with us. How should we like, or how would they like, Rainilaiarivuni for Rainilaiarivòny; Ranavalumandzaka for Ranavalomanjaka; *dzamba* for *jamba*; or *midzidzidzi* for *mijijijy*? Then think of *Dzakuba* for *Jakoba*! and, still worse, *Dzesusi* for *Jesusi*! From a philological point of view the *y* is a mere fad; there is just as much and no more to be said for the retention of *j* for *dz*, as there is to lead us to adopt new characters for the consonants *ndr*, *dr*, *mb*, *ng*, *tr*, *ntr*, and *ts*; but I fear we must leave the alphabet alone.

To proceed to the List of Words. The first word is 'ashes,' the Malagasy equivalent is given as *lavònona*, of which *vòno* is the true primitive (?) root, and in the provinces we have *lavònoka*; but there is the Malagasy word *vdvoka*, 'dust,' as a substantive, and 'worm-eaten' as an adjective; and out of the forty words given by Dr. Codrington under 'ashes,' about thirty contain *hu*, *vu*, *wo*, *vuvu*, *bu*, *nu*, etc.

In the second word, 'bad,' the Malagasy word given is *ratsty*; and Dr. Codrington is I think right in saying this may represent the *rahat* of the Malay Archipelago and the *jahat* of the Malay. The true root is probably *hat*, and it should be remembered that in the provinces *ratsty* is shortened to *raty*, thus showing a true affinity between the Melanesian and Malagasy.

In the word for 'banana,' the provincial Malagasy *dntsy* (found also as *ɔtsy*, and *hɔntsy*) has been taken, and not the Hova word *akòndro*; and Dr. Codrington ingeniously shows that this word, differing from the Malay *pisang*, has a close resemblance to several of the Melanesian words, especially Ulawa, Malanta, Saa, and Malanta Bululaha *huti*. This is more striking still if we remember what has just been written about *ratsty* and *raty*; for if *raty* equals *ratsty*, surely *huti* of the Melanesian languages is the very *hotsy* of provincial Malagasy. (Cf. *fdtsy* and *fdty*, *atsimo* and *atimo*, etc.)

The fourth word, 'belly,' seems to offer little similarity, for the Malagasy is *kibo*, and in the forty words of the Melanesian there is no resemblance; but I notice that in fifteen of them there is either a *to*, *og*, *tog*, *g*, or a combination of these three letters. Can these fifteen be compared with the Malagasy provincial word *tròka* or *tròky*? This seems to me to be very probable. But further, Dr. Codrington in his notes (p. 55), in calling attention to the Malagasy word for bowels, *tsinay*, says that *tinæ* is the Banks' Is. word for the same. He has not been aware of the fact that *tinay* is always used in the provinces. Note again that the *ts* is used in Imerina for *t* in the provinces, and is also so used in the Melanesian, Malay and Polynesian languages.

The fifth and sixth words, those for 'bird' and 'black,' clearly derived from the Malay, seem to have nothing in common with the Melanesian, save that the prefix *ma* in *mainty* (primitive root *inty*) is found in three dialects.

In the next word, 'blood,' the Malagasy *ra* (cf. Malay *darah*) seems to be

he real root; and it appears in no less than twenty-three of the Melanesian words.

The eighth word, 'boat,' is very interesting. There seems nothing to connect the Malagasy *lākana* with the Malay *prau*; but the Maori *whaka*, and thirty-one of the Melanesian words *aka*, *haka*, *vaka*, *faka*, etc., surely point to something in common. The resemblance is again more striking when we know that *lāka* is the primitive root and is still in use in the provinces for *akana*, which is only used in Imerina. Unfortunately Dr. Codrington says only canoes constructed with planks are properly called *aka*, *vaka*, etc.; for in Madagascar *laka* or *lakana* means a canoe made by hollowing out the trunk of a tree, the words *lākam-piāra* and *lākan drāfitra* being used for built canoes.\*

The Malagasy *zanaka*, a child, offspring (primitive root *anaka*), is undoubtedly the same as the Malay, but there seems nothing in common with it in the Melanesian words having a similar meaning.

The word for 'cocoa-nut,' as *nu*, *niu*, and *liu*, appears in nearly twenty of Dr. Codrington's list; and he rightly points out that this is the Malagasy *niho*, although it appears in Malagasy always as *vaniho*, i.e. 'fruit of the *niho*.'

There is a strange mistake in the Malagasy word he uses for 'cold.' It appears on page 41 as *malaina*, which is really 'lazy,' an adjective in *ma* from root *laina*. The Malagasy words for cold are *hatsiaka*, s. and *māngatsiaka*, adj. The word *firy*, coldness, and *mafiry*, painful, grievous, seem to have a likeness to the Matabello *mariri*, Mota *mamarir*, Ceram *makariki*, and the Maori *makariri*. There is another word for coldness and frigidity in Malagasy, viz. *ndra*, making an adjective *mandra*.

Under the word 'ear' he gives *sōfina* as the Malagasy word, and in his notes draws attention to the Sākalāva *tadiny*; but it should be remembered that *tadiny* is used for the foramen of the ear in Imerina; and *l* and *d* are very frequently interchangeable, a *d* in an Imerina or Hova word frequently becoming *l* in the provinces, and *vice versa*. Cf. *kilikely* in Imerina becoming *kedikedy* among the Bara, and perhaps among other provincial tribes also. Hence there is here a great resemblance between Malagasy, Melanesian, and Micronesian.

The identification of the Malagasy *atidy* (or *atily* in the provinces) with the Malay *tulor* and eighteen of the Melanesian group is very easy.

A more intimate acquaintance with Malagasy would have enabled Dr. Codrington to see that while in Imerina the common word for father is *ray*, the words *āba*, *bāba*, *āda*, *dāda*, etc., are also used, and these may be compared with the Malay *bapa*, *baba*, etc.

The word for 'finger' in Malagasy, *rantsan-tanana* (lit. 'branch of the hand'), seems to have no connection with any of the Melanesian words, but has an affinity with the Malay *rantung*; but Dr. Codrington points out that in the Malay Archipelago some compounds of *lima*, a hand, are found, and this leads me to think there is a connection between the Malagasy *dimy*, five (prov. *limy*), and the word *lima* so used.

For 'fire' we have an interesting list of words: *āfo* in Malagasy; "Malay, *api*; Polynesian, *ahi*, *afi*, and others *efi*, *aif*, *yaf*, *yap*; Bourir, Amblaw, and Ceram, *afu*, *ahu*, *yafo*; and through the Malagasy *āfo*, lead on to *aow* and *hao*. In Melanesia the variation is not so great: *avi* and *ev* differ little; but if, as is probable, *kapi* and *gapi*, *kapu*, *gapo*, *cap*, are the same word, there is enough to show a very close connection between the languages." There is a still further connection, for the Malagasy word for heat is *fāna*, adj. *mafāna*, hot, which appears in the Malay *panas*, Friendly

\* See a short paper by Mr. Dahle on this word, later on in this ANNUAL.—EDS.

Is. *mafana*, and others *bafanet*, *mofanas*, etc.; and Dr. Codrington thinks this may be the same as the Fiji *waga*, and the Fatè *faga*, for *q=ngg*, and *g=ng*.

Dr. Codrington shows that the Malagasy *fana* or *fa*, which is only used in the provinces of Madagascar for 'fish,' has a number of relations in Malay, Maori, Marshall Is., and Mota, as representing many other languages in the Malay Archipelago, Polynesia, Micronesia, and Melanesia.

*Lalitra*, a fly, Malay *lalut*, is again widely distributed; for the *la* or *le* appears in no less than thirty of Dr. Codrington's list of Melanesian words.

We hardly know whether to trace a resemblance between *ahoko*, a fowl, and the *kua*, *kokoroka* of the Melanesian, or not. *Kohokoho* in Malagasy is a word used in calling a fowl, and has its usual passive and intransitive verbs in *ina* and *mi*. The name may have arisen from its cluck. The word *hokolahy* again is uttered by the Malagasy when a hen is sitting, in the hope of its eggs producing cock chickens, and *hokovavy* when hen-chickens are desired. Then we have the Swahili *kuku*. It is difficult to say with which of these the Malagasy word is connected.\*

The word for 'fruit' again is very widely distributed, and there are some others in the list about which much could be written; but the space allotted for this paper will not admit of a detailed review of all, more especially as the "Short Comparative Grammar" of Dr. Codrington's book (pp. 101-102) is much more interesting to Malagasy students, as showing how much there is in Melanesian resembling Malagasy.

There is a very interesting page or two at the beginning devoted to the Demonstrative Particles, in which our *ity*, *iny*, *itsy*, *iry*, *aty*, *ary*, and *any* are compared with the Malay *ini*, this, *itu*, that, *sini*, here, *situ*, there; Maori *nei*, this near me, *na*, that near you, *ra*, that far; and Marshall Is. *kein*, this, with the same meanings; and he then writes: "In these the particle *na*, *ne*, *ni*, so common in Melanesia, is conspicuous. No form with *k* appears; and unless *r* has taken the place of it, no *l*. In Maori and in Malagasy *ri* and *ra* point afar, which may very well be *li* and *la* of Melanesia." Mr. Dahle refers us to his article in ANNUAL VIII. p. 79, for some remarks about these demonstrative particles.

The notes on the Definite Article are very striking. The article used in thirty islands is given, and I notice that in all but three *n* appears; in two of the remaining ones there is *o* and *lo*, and in the others *re*. Dr. Codrington rightly sees a connection with this ever-recurring *n* or *na* and our Malagasy *ny*; but as Mr. Dahle in the article just mentioned has treated the matter fully from a Malagasy point, we need do no more here than simply refer to it.

The Personal Article is very common though not universal in Melanesia, and is used exactly as our personal articles are in Malagasy. "*O vat* in Mota is a stone, *i Vat* is Stone, a man's name." This article, he says, "varies but very little, being *i*, *e*, *a*." *I* is in use in ten islands; *e* in Vanua and Torres Is., and *a* in five; so that the *i* predominates. Dr. Codrington, in referring to our use of the *i* before common names of relationship—father, mother, etc.—says: "In this latter particular also the correspondence with Melanesian use is complete." He further adds: "The use then of a personal article,† a remarkable feature in a language, is found to prevail in Melanesia, Polynesia, in Madagascar and, almost certainly, in the Malay Archipelago. The meaning and use is identical. . . . The common possession of this

\* Probably these are all merely examples of onomatopœia.—EDS.

† In Dr. Codrington's book all these parts of speech are printed with a capital; we have not thought it necessary to follow him so literally in this rather unusual mode of spelling common nouns.—EDS.

feature is certainly a point to be noted in the comparison of the Ocean languages."

In reading through the Pronouns, I cannot find any striking resemblance, except in the third person, where *i* occurs six or seven times; but in the fact that in all the Melanesian languages there are two forms of the first person, the *inclusive* and the *exclusive*, which correspond exactly with the Malagasy, a most interesting connection is evidenced. After giving a list of the Malagasy pronouns, Dr. Codrington writes: "The resemblance between these and the Melanesian pronouns is certainly not easy to see." He draws attention to the *re* making a plural, which we know Mr. Dahle holds to be the contracted form of *ra*, and I think Dr. Codrington is probably mistaken in trying to make out that the *re* of our pronouns in the third person *ra* of Melanesia.

In the Suffix Pronouns the resemblances between the Melanesian and our own are too great to be attributed to mere accident. In the first person, four languages have *ku*, the exact sound of our own *ko*, seven *gu*, some of which are nasal *ng*, nine have *k*, one (Fiji) has *qu*, others have *g*, *ke*, *go*, and only one, Duke of York, has *n*. In the second person, *m*, *ma*, or *mu* predominate; but in the *third* person, out of thirty-one islands or groups, in only one case is an *n* missing. Further, Dr. Codrington points out that the Maori and Polynesian possessives are *ku*, *re*, and *na*; and after comparison and reference to the Malay, he says: "It is a common possession in all these archipelagos; and this unites the languages together in very remarkable manner. From whatever region, by whatever routes, they have reached their present seats, it is evident that these pronouns were among them before they separated." In passing, let me remark that Dr. Codrington has pleased Mr. Dahle in one paragraph, p. 127, in which he says: "The pronouns suffixed are used in the same way in Malagasy with some verbs: *tia-ko*, I love, *vôno-ko*, I kill, which, if explained as the Santa Cruz example, are 'mine the loving,' 'my killing.'" Mr. Dahle has annotated the paragraph as follows: "Yes, quite correct." I do not wish to re-open the question of passive verbs, but I would respectfully point out that the *tia* to which the *ko* is suffixed is not *tia* at all, but the *passive tiana*, and the *na* has dropped, as is the case with all trisyllabic words with accent on antepenult; and *vonoko* is not used, but *vondiko*, from the derivative passive verb *vonôina*. No Malagasy would use *vonoko* for 'my killing,' in the sense of 'killed by me.'

I may also note in passing that while there seems little resemblance between Melanesian and Malagasy Interrogatives, Dr. Codrington says they do not say "What is his name?" but "Who?" exactly as the Malagasy do. In Lepers' Island there is an excellent illustration of similarity with Malagasy, which I must quote at length: "There is in that language the word *heno* or *hen* . . . . which stands in the place of a proper noun which is not known or not remembered. If the question is asked *I heno*? Who? the question is not who he is, but what his name is. If a person fails to remember the name of another, he asks *I heno*? What is his name? The reply gives the name. In Florida *hanu* is used." Now let us remember that *i* is used for *izy* in the provinces, notably in Betsileo, and *ia* for *iza*. Then we have in Imerina *Anona*, *Iànona*, *Rànona*, etc., and provincial *Ano*; so that dropping the *h*, *i hano* of Lepers' Island and a *hanu* of Florida look like genuine Malagasy words. If a Betsileo asks 'Who is he?' he would say '*Ia ano*?'

In the Nouns there seems to be a resemblance to our relative nouns, the terminations being *ana*, *na*, *ena*, *ina*. For instance, in the New Hebrides, *rasa*, to come, *rasuana*, coming. It certainly is a matter worth keeping before one's mind, for I think we have here a closer affinity than we have thought of before. Take the Malagasy *raô* and *rosàna*. The meaning is different



from that of the New Hebrides, but the construction seems identical. Take another example from Florida: *bosa*, to speak, *bosana*, his speaking; but when the verbal substantive is formed by adding *a* to *bosa*, the suffixed pronoun makes *bosaana*, and the meaning is passive, 'his being spoken to.' Dr. Codrington adds: "The verbal nouns of the Malagasy ending in *ana* have a clear relation to those of the Polynesian and Melanesian languages." I should, however, like to know to which of our *ana* he refers. For instance, we have the word *tety* in Malagasy, which we think is from the Malay *titi*, *tituyan*, a bridge. The original is not in use in Imerina, as I doubt whether the provincial *tety* is the same. From this word *tety* we get, by adding suffixes, *tetèzina*, v. pass., to be walked through; *itetezana*, v. rel., referring to time, place, manner, etc.; *tetizana*, verbal noun, a bridge.

Each of these has a suffix: the passive verb *ina*; the relative verb *ana*, and prefix *i*, from the *mi* of the active verb; and the verbal noun *ana*. I trust that our new Dictionary, which I learn Dr. Codrington has received, may help him to study these forms; and it is to be hoped that the clear arrangement of the words, and the regular order in which all forms are given, may enable philologists to trace affinities with other languages in a way not possible before.

The next subject treated of by Dr. Codrington is the Prepositions, and here again there are some very close affinities with Malagasy. In no less than twenty-four of the languages referred to by him there is a close resemblance to our prepositions *i* and *a*, in *imaso* and *ambrony*, etc. "The simple locatives *a*, *i*, *e* appear throughout the whole Melanesian area." He identifies our preposition *amy* with the Mota *ama*, and in this we think he is right, although a writer in the *Madagascar Times* has been trying to show that we have no word *amy* in the language.\* I cannot agree with him; for, if there were nothing else to disprove his theory, the very fact of our having *amiko* is to my mind sufficient to prove that *amy* is the root; for were it *aminy*, we should most certainly have *aminko* and not *amiko*. There is no other word in the language which rejects a *ny* before adding a suffix, and surely we cannot base a theory on an exception, and an exception which also violates the ordinary rules of the language.

Our prepositions *a*, *an*, *amy* (*amby*? *avy*?) Dr. Codrington compares with the Melanesian prepositions, and says the Melanesian locative *a* is represented by *a*, as in *an*; and the other prepositions are compounded with this *a*, answering precisely to the Mota compound prepositions *ama* and *ape*. I confess that I can hardly follow him here. In the Malagasy language an *a* or *i* prefixed to a noun makes a preposition, as *maso*, the eye, *imaso* or *imasonry*, before the eyes; the final *ny* Dr. Codrington would have us believe is a genitive preposition, and gives us the example *ravin' ny hazo*, *ravin' ny hazo*, or *ravin-kazo*=leaf of a tree. We may accept this, I think. He has another interesting note on the *t* of *tamy*, as a tensal sign, and tells us that in Mota an adverb of place is formed by the prefix *ta*; e.g. *avea*, where? *tavea*, belonging to what place? and says: "One may doubt whether it is not this sense which in Malagasy is transferred to, or is taken for, that of past time." To my mind this *ta* is very significant. Take, for instance, the word *aiza*? or *aia*? where? and the past of the same, *taiza*? and *taia*? How very like the *avea* and *tavea* of Mota?

Then again he says: "There is a much more characteristic and more widely applicable correspondence between the Malagasy and the Melanesian use of the preposition *an*, *a*." Further down he says: "It is a difficulty in teaching geography to Melanesians to make them clearly apprehend that Asia, Africa and America are not Sia, Frika, Merika, with the preposition *a*;

\* See Mr. Dahle's paper, pp. 291-294, *ante*.—EDR.

ly is that manner of using the name of a place in accordance with 'of speech.' Just think of our *Andsy*, *Ankàratra*, *Antanàna*, *z*, etc., etc., and then we see how close is the affinity.

Adverbs we do not see so close a resemblance, but I have noted them that *a maran* is used for 'at light,' and I have been reminded also use of *amaray*, meaning 'in the morning.'

Adjectives give us a fine field for comparison. Dr. Codrington fills pages in treating of adjectives formed by suffixes, which are mostly *ra*, *ina*; and having shown how common they are, he says that the Malay nor the Indian Archipelago vocabularies show any adjecination, and adds: "The Malagasy equally fails us." Such is the case, however; there is a large class of adjectives formed by suffixes. grammars, before my *Malagasy for Beginners* was published, had them with a line or at most two; but in preparing my book I made a list, which can be extended, of "Adjectives formed by Suffixes;"

W. E. Cousins, in his revised "Concise Introduction" prefixed to the dictionary, gives them a place (p. xlii.): "Root with affix *ina*, *ana*, the a reference for further illustrations to my book. Let Malagasy read the following from Dr. Codrington's book:—"Maori adjectives peculiar form, but in Samoan the addition of *a* to a noun makes an adjective, as . . . . *fatufatua*, stony, from *fatu*, a stone. It is at once that this is the termination *ga*, so common in Melanesian;" and think of *to*, a stone, *vatòina*, stony; *òlitra*, a worm, *olérina*, worm-eaten; mouth, *vavàna*, talkative, loquacious; *bika*, shape, *bikàna*, shapely,

Following Dr. Codrington's reasoning, I would say: "It is at once that this is the termination *ga*, so common in Melanesian." So that it is, instead of "equally" failing us, shows a very strong likeness to adjectives of Melanesia formed by suffixes.

A large number of Malagasy adjectives formed by prefixing *ma* to a noun show a close affinity with Melanesian languages. Let the following from Dr. Codrington's book speak for themselves:—

lota :	he says :	"There is a prefix of condition <i>ma</i> ."
lotlav :	"	"The prefixes <i>ta</i> and <i>ma</i> ."
olow :	"	"The prefixes <i>m-</i> , <i>t-</i> are those of condition."
ak :	"	"Adjectives have the prefix of condition <i>ma</i> ."
Leon and Sazar :	"	"The prefix <i>ma</i> . . . . . characteristic of adjectives."
lerlav :	"	"The prefix <i>ma</i> is common to adjectives."
og :	"	" <i>Mersom</i> , rich; <i>mansom</i> , avaricious."
orbarbar :	"	"The prefix of conditions <i>ma</i> ."
o :	"	" . . . . . and the prefix <i>me</i> , <i>ma</i> ."
laewo :	"	"The adjectival prefixes <i>ma</i> and <i>ta</i> ."
ba :	"	"The prefix of condition <i>ma</i> is common to adjectives and verbs."
spirito Santo :	"	"The prefix <i>na=ma</i> appears."
esake :	"	"Adjectives very frequently have the prefix of condition <i>ma</i> ."
agani :	"	"The prefix of condition <i>ma</i> is common to adjectives and verbs."
lorida :	"	"The prefix <i>ma</i> , as in other languages, shows condition and is found in adjectives."
uke of York :	"	"Many adjectives begin with <i>ma</i> , the common prefix of condition."

Of 34 Melanesian languages under consideration, 16, or nearly half, have a close resemblance to the large class of adjectives in Malagasy, in which the prefix is exactly similar. Surely this is not an accidental resemblance. I have carefully gone through the list of expressing comparison of adjectives in Melanesian, but I can find nothing corresponding to our *kokèa* and *nèho*. But I think Dr. Codrington's

data, and my own, based on the adjectives formed by suffixes and prove that a very close affinity exists between adjectives in Melanesian Malagasy.

Next in order come the Verbs, and in these I confess I am somewhat disappointed; for, from what I had seen in articles, particles and adjectives I expected to find many affinities here. I will try, however, to pick out all that is interesting to us, and at the same time point out Dr. Codrington's misapprehensions.

As far as the fact of verbal particles being used is concerned, there is a close resemblance, for they are universal in Melanesia and Polynesia; they are found in Micronesia also, but the particles are not at all like *mi*, *man*, *mampi*, *mampan*, etc., etc. In referring to our Malagasy particles he says: "A certain obscurity belongs to the practice of writing a verbal particle in one with the verb, verbal particles appear with change according to the tense: . . . *mijery* is taken as the verb, *jery* as the root. By writing *mi jery* separately, *mi* is shown as the verbal particle. The prefix *m* changes to *ma*, *na*, *ha*, as *mahay*, *nahay*, *hahay*, or *mo*, *no*, *ho*." Now we can see that Dr. Codrington does not understand our verbal prefixes. To have *ma*, changing to *ha* and *na* for future and past, but we have *n* as he says. "The main point of comparison is the common use in Malagasy and the Melanesian languages of particles prefixed to the verb, which is to mark the tense. As in Melanesian languages, these particles are *ma* when a prefix—reciprocal, causative, conditional (?), is taken before the verb, *mankatia* is to love, *mampankatia*, to cause to love, the causative prefix *ma* is to be intercalated, *ma* remains before the causative." "In Malagasy *m* is to love, with the verbal particle *we tape*, *vatape*, to cause to love, and with the verbal particle *we vatape*; *we* corresponds to *ma*, *va* to *m*, the true verb is *tape* and *katia*. In this there is the double correspondence of the verbal particle and the causative prefix. In the Philippine languages the prefix *m* changes into *n* to mark the past time."

The above quotations are very interesting to us, in spite of Dr. Codrington's misunderstanding of our prefixes. He has evidently not perceived that *manka* is a prefix itself, and that *tia*, and not *katia*, is the root of the verb. We can easily form other examples from our prefixes, and the use of prefixes in both languages points to some common origin. The fact that *m* in the Philippine language changes to *n* for the past tense corresponds exactly to our use.

In Maori he tells us, on the authority of Dr. Maunsell, that "the verbal particles are words which have no meaning in themselves, but which when fixed to a word, endue it with the qualities of a verb." This again is true of our Malagasy verbal prefixes.

On page 183 Dr. Codrington gives a list of the verbal prefixes, which he arranges in four columns, headed Causative, Reciprocal, Conditional, and Spontaneity. The Causative is almost universally *va* alone, or, with a syllable, *ka*, *ga*; it is *a* in the Loyalty Is., and becomes *wa* in Duke of York; while in Savo it is *au*, which seems peculiar. Dr. Codrington urges that *va* is the *whaka*, *faka*, *aka*, etc., of the Polynesian languages; and there can be little doubt that the Malagasy prefix *maha* is the basis of his opinion on a quotation made by Marre de Marin from B. Malagasy Grammar. Then he says that the causative intercalary *a* is to be the causative prefix *fa*, and gives the illustrations *mandiha*, *mampandihana*, to cause to go; *manao*, to do, *mampanao*, to make to do; *miditra*, to enter, *mampiditra*, to cause to enter; *mibbaka*, to go out, *mibbaka*, to cause to go out. Then he says: "To call the particle *inter* misleading, for the verb is *nao*, *deha*, *dira*, as is shown by the change

verbal particle from *ma* or *mi* to *ha*, *na*, *hi*, *ni*." We see that he is again in error in the above quotation, for we know that *tao*, *ltha*, and *iditra* (or *tsa*) are the true roots. We are surprised to see that he writes: "To write the verbal particle separate from the verb prevents the misconception conveyed in the word 'intercalary.' In the Malagasy words above, *n* in *mandeha* belongs to *d*, not to *ma*, and the causative prefix appears as *mpa*, *mpi*, for *a*, *pi*, *fa*, *fi*, in accordance with the use of the languages." Of course we cannot assent to some of these statements, and Mr. Dahle has added to my notes on this page: "The author is going astray on this point." But while we cannot agree to the statements about *nao*, *deha*, and *dira*, and of the *n* in *mandeha* not belonging to the *ma*, we can very readily accept what he argues on the question of there being an affinity between Malagasy and the Melanesian language in the use of causative prefixes.

The Reciprocal prefixes are given as existing in twenty-one Melanesian languages; they seem to be two, represented by *vei* and *var*, with variations *o vui*, *hei*, *hai*, *fai*, *we* and *e*. Here he again strives to show the intimate connection between Malagasy and Melanesian; but unfortunately he again falls into the error of *kata* being the root of *mifankatia*, and seemingly of considering *katahotra* the root of *mampifankatâhotra*. We must be content therefore in going no further than saying that Malagasy and Melanesian are alike in having reciprocal verbal particles, although the particles in themselves are totally different.

"The prefixes of Condition *ma*, *ta*, are again almost universal in the Melanesian languages." In the list twenty have *ma*, *me*, or *m'*, and in others *ta*, *t'*, and *da* take their place. In his examples he gives *wora*, asunder, *mawora*, broken asunder; *hare*, to tear, *mahare*, torn. These are very much like our *tory*, sleep, *matory*, to sleep, as we have usually rendered it, but if we say *asleep*, the analogy is complete. This surely is an important matter to be remembered in our study of Malagasy.

The prefix for Spontaneity appears in thirteen of Dr. Codrington's list, as *tara*, *tav*, *ava*, *tafa*, etc. What he says is worth quoting: "An example from Mota will explain it: to untie a rope is to *ul* it, but a rope that has not been untied by anybody, but has come untied by itself, *me tavaul*. The same is the case when the prefix is not applied to a verb: *raka* in Mota is 'up,' *tavaraka* is to get up, not to be raised, to get up of one's self... The resemblance between the Malagasy *tafa* and the Banks' Is. *tava* is so complete in form and signification, and this in a fine point of meaning, that, considering the space of ocean that separates the languages, it is a matter of astonishment that it should exist. It is impossible that it should be accidental; it could not be introduced by Malays or Polynesians who have it not; it must have survived no one can tell what vicissitudes and changes, in a course of years which no one can number, and presents itself, like a rare species of plant or flower in isolated and widely separated localities, a living and certain proof of common origin and kindred." The above quotation is of extreme interest to all concerned in the study of languages, and we heartily endorse every word he says. But for the sake of philologists who are not Malagasy scholars we must add that *tafa* has other meanings in Malagasy. It is sometimes used exactly like *voa*, as a genuine passive prefix: e.g. "*Tafa-tsangan' ny mpandrafitra ny hazo*" means "Has been set up by the carpenter the wood." Sometimes it also implies that the subject of the sentence has come into the state implied by the root, undesignedly (cf. *New Mal.-Eng. Dictionary*, p. 597, *tafa*). While I was preparing the Dictionary the native who gave me an illustration of the *third* meaning of *tafa* said: "Suppose you are knocking a table with no intention of disturbing anything, but your knocking disturbs or shakes the pens on the rack, the

pens would be *tāfahitsika*; and again, windows made to rattle by explosion of gunpowder would also be *tāfahetsika*." The meaning is passive in such instances, and led me to put *tafa* with the passive prefix seeing that like the *voa* and *a* it takes the suffix pronouns as the agent.

Dr. Codrington, in concluding his notice of the verbs, writes: "M. de Marin maintains that a Malagasy verb with affix, in its radical s indicates a passive, and that the various prefixes make the verb active, neuter, causative or reciprocal." "On ne saurait trop insister sur ce fait curieux et qui est l'une des assises fondamentales de la grammaire malgache malayse et javanese." Unfortunately M. Marre de Marin is in error in The passive prefixes are

*A-* as *rafitra*, *aràfitra*  
*Voa-* " " *voaràfitra*  
*Tafa-* " " *tafaràfitra*,

and then there are passives with suffixes; e.g. *rafitra* becomes *rafitra* etc. The word *rafitra* in the new Dictionary gives a good illustration of the prefixes and affixes, passive and active.

In the reduplication of verbs also we have another affinity, although Codrington does not quite understand the Malagasy custom in such cases. He says: "It should be observed, as concerns *form* of reduplication, though prefixes, causative and other, are reduplicated with the verbal particles never are. *This is the case also in Malagasy.*" I emphasised the last sentence because I cannot agree to it. This is the case in Malagasy. No prefix is ever reduplicated, and even the final syllables *na*, *ka*, and *tra* are frequently thrown off from the former before adding the second. To take one of Dr. Codrington's words as illustration, *mifampankatiatia*. *Mifampanka* is the compound in which we call reciprocal causative, the word *tia* is the root, and only reduplicated, giving the verb a *less* intense meaning than if used alone. Reduplication of a verb never emphasises its meaning. It does, however, sometimes indicate continuance or repetition, as in *manitsakitsaka* (reduplicated root *hitsaka*, with prefix *man*), the meaning of which is to trip on repeatedly (cf. *New Mal.-Eng. Dictionary*, p. 267, *hitsaka*).

The last point to which I would call attention is that of the Numerals have long known that the Malagasy numerals as a whole bear a great resemblance to the numerals of Polynesia and the Malay Archipelago to the Malay. Mr. Wallace's list, quoted by Dr. Codrington, is as follows:

In 33 languages for	one,	22	have some form of	<i>sa</i>
"	two,	30	"	<i>rua</i>
"	three,	27	"	<i>tol</i>
"	four,	all	"	<i>pat</i>
"	five,	31	"	<i>lima</i>
"	six,	30	"	<i>an</i>
"	seven,	29	"	<i>pitu</i>
"	eight,	24	"	<i>walu</i>
"	nine,	29	"	<i>sio</i>
"	ten,	12	"	<i>pulu</i>

Dr. Codrington says that the decimal series of Melanesia is identical with that just given of the great majority of the languages of the Malay Archipelago, but not with Malay itself. We only need to put Madagascar in Melanesia in the above sentence to show how close is the affinity.

Some of Dr. Codrington's analogies and derivations may at times far-fetched to a casual observer, but I think it will be admitted that he really succeeds in proving his case. I would remind Malagasy scholars that there are many words in Malagasy that seem totally different and yet really the same. Take the Hova word *maizina* and the Bara word :

who at first sight would say they were the same? and yet they are. On return from my perilous journey to the S.W. coast, I was lying weary and in a Bara house, and as one after another came trooping in, unable to distinguish any person in the place owing to the thick smoke, the expression "*meka itoy*" was always used. Now see how this is *maizina*. Eliminate the *z*, as is common in *ia* for *iza*, *aia* for *aiza*, and *maina* is left. We find that *na*, *ka*, and *tra* (?) are interchangeable, e.g. *fasi*, *fāsina*, and *ta* all meaning 'sand,' thus we get *maika*. But I found that the Bara really pronounced the Imerina diphthong *ai* as *e*—my guide Rainibébaka was being called *Rènièbèbaka*. Hence by a simple process *meka* is seen to be really the same word as *maizina*.

In conclusion I would say how much we are indebted to Dr. Codrington for bringing us, in a far more convincing manner than any other writer we have, how close is the affinity of Malagasy with the Melanesian and other Oceanic languages. We have known for a long time that there is a large number of words in the Malagasy resembling Malay and other allied languages, for we have nearly 400 such noted in the new Dictionary. The grammatical construction of the Malay is, however, so different from Malagasy that we always had to stop at *words*; but Dr. Codrington shows us that in letters, pronouns, particles, nouns, verbal forms, prepositions, numerals, &c., the connection between the Oceanic languages and Malagasy is very close.

Hence we are led to the question: Whence came the Malagasy? We cannot pretend to have the ability to say much on the subject. We all know that the Hova are a different race from the rest of the tribes inhabiting Madagascar. All the outlying tribes seem to have more in common with each other than the Hova have with any one of them. Have the Hova been brought by currents or winds from Polynesia, and having mixed with and assimilated the rest of the Malagasy tribes, given them their language? or

I would remind ethnologists and philologists that the eastern coasts of Madagascar are covered with pumice stone brought by the currents from a great eruption in Java four years ago. I saw tons of it on the beach at Mahanoro in 1885; and during the voyage to Mauritius we passed a shoal of it still being drifted along. If such vast amounts of pumice thus be brought so many thousand miles, could not boats be also brought? I merely wish to draw attention to the fact, leaving competent linguists to take it into consideration. Is there not a close resemblance between all these Oceanic languages, Malagasy being the western boundary and the isles of the Pacific the eastern? Dr. Codrington has given us the most valuable contribution from the Melanesian point of view; and I hope some philologist with time and means at his disposal would take up the subject and compare all the grammars of the Oceanic languages and state them as clearly as Dr. Codrington has done his portion of them. We try to do our best for Madagascar, and I do not yet despair of being able to get a tabulated list of the variations of words among our Malagasy tribes; although I must confess my appeals to missionaries and others, English and Europeans, stationed among the various tribes, when the new dictionary was being prepared, brought me the sum of—nothing. Not a word was contributed by any one outside Imerina, although all were asked to. I hope for better things in the future.

Such wish the notice of Dr. Codrington's book had been in more convenient hands. In the next ANNUAL I may take up the subject again, as there are many points of interest in the remaining portions (pp. 253—572), which he gives us the grammars of the 35 islands whose languages he has investigated.

J. RICHARDSON.

## THE TRIBAL DIVISIONS OF THE HOVA MALAGASY.

ANY enquiry into the origin of the tribal and caste divisions of a people whose authentic written history is still short of a century old must necessarily be attended with considerable difficulty and uncertainty; and all I propose in the present paper is briefly to indicate some of the chief facts of interest and importance which a little enquiry among the Malagasy themselves has elicited as to the origin and nature of the various divisions now existing among the natives of Imerina.

The name 'Hova' among writers on Madagascar is generally applied to the whole of the tribe inhabiting the highlands of Imerina, but among the natives themselves the term has usually a narrower acceptation.\* In speaking of the whole free population of Imerina, the names '*Ny Ambanilanitra*' ('The Under-heaven') or '*Ny Ambaniditra*' ('The Under-the-daylight') are generally used, while the term Hova is usually restricted to one of the chief tribal divisions of the Ambanilanitra. Broadly speaking, the whole population of Imerina may be classed into three great divisions:—(1) *The Andriana*; (2) *The Hova*; (3) *Theainty*. Probably a brief consideration of these one by one will form the most convenient division of our subject.

I.—THE ANDRIANA. The Andriana form a large and distinct class or tribe, including the families of the nobility of all ranks from the sovereign downwards. They are the privileged aristocracy of the Hova people. Numerically they are greatly inferior to either of the other divisions, but in a country where popular representation is as yet in its veriest infancy, the real administrative power is vested in the highest family of Andriana, or rather in the sovereign, who is called pre-eminently *The Andriana*, or *The Andriamanyaka* (i.e. the reigning Andriana).

There are various fabulous accounts as to the origin of the Andriana. Some describe them as descended from the Vazimba, the aboriginal inhabitants of the country; while others ascribe to them a divine origin. One of the latter accounts gives the name of Andrianerinerina as their divine progenitor. This Andrianerinerina, it is said, was "a son of God descended from heaven to play with the Vazimba." The account runs as follows:—"God sent down his son to play with the Vazimba, and God said, 'This my son wishes to play with you; but do not take him near any sheep, for my son does not eat mutton.' But one impious Vazimba said, 'Come, let us cook him some food in the pot used for cooking mutton, and we will see what will happen.' And when they had cooked it, they made the son of God eat thereof. Now when it was evening he was unable to return home, and God said, 'Why are you keeping this my son here—below?' Then the Vazimba fled. Then was God angry. 'Assemble all the Vazimba who are here—below,' said he. And when all the Vazimba were assembled, God

\* See also p. 305, *ante*, foot-note, for wider meanings of the word.—EDS.

of the Hova, besides their general service to the sovereign, are also in feudal servitude to the Andriana, or lord of the manor, where they happen to reside. Many of the nobles, chiefly of the Andriamasinavalona tribe, have large estates in the country, over which they exercise a species of sovereignty very similar in kind to that exercised by the sovereign over the whole people; indeed the same word (*fanjakàna*, 'kingdom') is sometimes used in speaking of the jurisdiction of these lords of the manor, as that employed when referring to the king or queen.

The lands held by these Andriana are called *mènakely*; and the same term is used in speaking of the Hova who reside within the limits of these estates, and who perform feudal service to the Andriana *tòmponakely* (lord of the manor). These Hova are little better than slaves; and some of them are in fact worse off than many of the slaves. In addition to the *fanompoana*, which, as Hova, they have to perform for the sovereign, they have also to pay taxes in money and rice\* to the lord of the manor, besides doing any personal service which he requires, such as digging his rice-fields, building his houses, making his tomb, etc.

In thinking of the relation in which the Andriana *tòmponakely* stands to the Hova residing on his estate, one cannot fail to be struck with its similarity in many important respects to that subsisting between the sovereign and the whole people. And this fact in all probability points back to the time when there was no strong central government, as at present, but when the whole of Imerina was divided up into a number of petty chieftaincies, whose rulers were constantly making plundering raids on each other. And when, at a comparatively recent date, the contending tribes were reduced to order and united under one common sovereign, the government of the latter would be modelled on the relationship already existing between the various subjugated chieftains and their dependents. At the same time the authority of these local chieftains would be as little interfered with as possible; so that the present state of things probably forms a direct link with the remote past.

The rest of the land which is not divided out among the *tòmponakely* is called *mènabé*. The people living on these *menabe* are not subject to any one but the sovereign;† it will thus be seen that they are much more easily circumstanced than those residing in the *menakely*, since these latter have a 'two-fold service' to perform (*fanompoana rôa sôsona*).

The origin of the names *menabe* and *menakely* seems doubtful, but a not improbable etymology derives them from the forms *omèna bè* and *omèna kèly* ('given much,' and 'given little'), originally used, it is said, in referring to the amount of land granted by the sovereign to the various nobles or chieftains.

Before proceeding to enumerate the principal divisions of the Hova and the Mainty, we may now briefly refer to one or two further special privileges enjoyed by certain ranks of the nobility.

\* In the case of the *menakely*, the *hetra* or land-tax referred to above is divided between the Andriana, lord of the manor, and the sovereign.

† The land owned by a very near relative of the sovereign appears also to be called *menabe*.



The three classes of Andriana from the Andriantompokoindrindra upwards have the privilege of dividing the *vôdi-hèna* with the sovereign. Whenever an ox is slaughtered the rump must always be reserved and taken up to the palace, or to the *tompo-menakely* in whose district it is killed, as the case may be. The reputed origin of this curious practice is rather remarkable. In the time of Ralambo, one of the very early sovereigns who reigned at Ambohidrabiby, oxen were called *jamoka*, and the people had not yet begun to eat beef. "And there was one poor man who had many children; and the hedgehogs and partridges which he caught were not sufficient to support him and his wife and children; then he went, it is said, and killed a *jamoka* in the forest and brought it to his wife and children, and his children became very plump when they ate the flesh of the *jamoka*. And some one asked him, 'What makes your children so well favoured?' And he replied, 'Hedgehogs and partridges.' 'Do you mean to say that those things make your children fat like this?' But after a while this man told the king that the flesh of the *jamoka* was savoury. 'Keep it quiet,' said the king, 'and let me taste it first, for fear we be killed by the people for eating what our forefathers have not eaten; so the king tasted and found it sweet. And then he went to the forest and killed a *jamoka* and tasted every part of it, and the rump he found most savoury of all; so the rump became the portion of the Andriana. Then the king collected many oxen and told the people that they were good for food."

II.—THE HOVA. It is very difficult to obtain anything like reliable statistics as to the relative numbers of the three principal divisions of the inhabitants of Imerina, but probably as many as two-thirds of the whole population belong to the tribe of the Hova proper. The Mainty come next in numerical importance, while the Andriana form a comparatively small fraction of the total population.

There are no marked caste divisions among the Hova, as among the Andriana; and such divisions as do exist appear to depend more on mere geographical position than on any radical differences of race. As far as the language affords any indication, the Hova are practically one people; one language is spoken throughout Imerina, the slight dialectic variations which are found being much less marked than is the case in England, for instance. But, as has frequently been pointed out, a consideration of the physical characteristics of the Hova people would seem to suggest a mixed origin. But the question of the probable ethnological connexions of the Malagasy has already been frequently discussed, and the natives themselves appear to have no current tradition which throws any further light on the subject.

Imerina proper is divided geographically into six districts or counties. These are named Avàdràno, Vàkinisaony, Ambôdiràno, Vàkinankàra-tra, Vônizôngo, and Màrovàtana. The origin of these divisions is ascribed to Andrianampoinimerina. Before the time of this monarch the country appears to have been divided into two petty kingdoms called North and South Imerina, the little river Màmba forming the boundary line between them, and the two towns of Ambohimanga and Antananarivo being their respective capitals. Southern Imerina, it is said, corres-

ounded in area with the two districts now called Vakinisaony and Amodirano; and at the time of the accession of Andrianampoinimerina to the throne of the northern province, this southern kingdom was governed by a prince named Andrianambòatsimaròfy. The son of this hieftain, who was named Andriamàromanòmpo, was conquered by Andrianampoinimerina, probably during the last decade of the 18th or about the beginning of the present century, and thus the foundation of the present kingdom of Imerina was laid.

The people of Avaradrano, the original kingdom of the present reigning house, still enjoy certain privileges, and take precedence of the other provinces in public proclamations, etc. In order clearly to understand the relation in which Avaradrano stands to the other divisions of Imerina, it will be well briefly to notice the three chief tribes into which the people of this district are divided. These are called Tsimahafòtsy, Tsimiambohòlahy, and Mandlavàto. The origin of these three divisions appears to be no longer remembered, but there are various traditions explaining the meanings of their names. One of these may be worth recording. The Tsimahafotsy, it is said, were formerly named 'Vilànivỳ' (Iron-pots) and the Tsimiambohohalahy "Vàkitrònga," and this is how their names came to be changed. There was a king reigning at Ambohimanga named Andriantsimitòviaminandriana, who sought the hand of a certain princess of the Tsimiambohohalahy tribe (whose head-quarters are at Ilàfy). But the lady replied, "Unless Andriantsimitoviaminandriana will agree to allow my nephew Imàvolàhy to succeed me, I will not consent to be his wife." And the king, on account of his love to the princess, consented, and the two tribes were assembled, and a solemn compact entered into, and a 'stone of witness' set up. But when the king died, the Tsimahafotsy broke the compact and set his own son on the throne. As soon as the Tsimiambohohalahy heard of this, they sent word to say, "If you overthrow the word of the agreement and the oath which was taken (for behold, the stone of witness is not fallen, but still stands), then prepare your fortifications, for we are coming!"

And when the Tsimahafotsy heard this, they said, "What shall we do? For this is the word of the Tsimiambohohalahy, and in truth we are breaking the agreement." So they gave way. Then the Tsimiambohohalahy sent word again saying, "Drive out then this king whom you have set up, for unless you do this, we will *not turn our backs* on you (*tsy tiamboho anareo*), but will make war upon you without more ado."

Then the Tsimahafotsy drove out the king by the west gate of Ambohimanga; and the posts of the gate by which he departed are still to be seen to this day resting upon a large fig-tree; but the gate and road are now blocked up, and the sovereign never passes through it. That is why the 'Iron-pots' changed their name to Tsimahafotsy, because they *tsy nahafotsy* Andriana, i.e., they were not ashamed to turn out their prince.

The origin of the name of the third tribe—the Mandiavato—is said to have been a boast of their ancestor: "They who tread on us *tread on bones*" (*mandia vato*).

After the conquest of Southern Imerina by Andrianampoinimerina, he transferred the seat of government from Ambohimanga to Antananarivo. The name of this town was formerly Ialamanga, but Andrianampoinimerina, in order firmly to establish his power in the new capital, chose out one thousand men from each of the three tribes of his own kingdom of Avaradrano and placed them at Ialamanga, which thenceforth took the name of *Antananarivo*, that is '*The City of the Thousands*.' To these three thousand men of Avaradrano he gave the name of 'Vòromahery' (Eagles or Hawks), a title of honour indicating their strength and swiftness in performing the king's bidding.

Before leaving this part of our subject the reputed origin of the other divisions of Imerina may be briefly indicated.

*Ambodirano*, "the base of the waters," so called because in this district rise many of the tributary streams, which, taking their origin from the slopes of the Ankaratra mountains, flow in a northerly direction and swell the waters of the Ikopa.

*Vakinisaony*, "cut or crossed by the river Sisaony," one of the main tributaries of the Ikopa from the south-east.

*Vakinankaratra*, so called because it is "broken or cut up" by the spurs of the Ankaratra mountains. The inhabitants of this district are mostly of the dark non-Malay race and appear more akin to the Betsileo than to the Hova proper.

*Marovatana*, "many bodies or persons"; a curious tradition gives the following as the derivation of this name. When the people of this district were digging their fosses or deep intrenchments, immense numbers of men were at work with no clothing but their *salàka* or loin-cloths, and all the passers-by were struck with the sight and exclaimed "Akòry ity hamardan' ity vatan' olona!" ("What an immense number of people!")

III.—THE MAINTY. The term Mainty (black) is not applied indiscriminately to all the inhabitants of Imerina who belong to the dark race, but in general is only used in speaking of the slave population.

The great majority of the slaves now held by the Hova are the children or grandchildren of the captives taken in the wars of aggression carried on by the Hova against the outlying tribes, chiefly during the early half of the present century. The majority of these belong to the Betsileo tribe, but Sakalava, Taimòro, Sihànaka, Bètsimisàraka, and others are also met with in considerable numbers. These slaves, even when set at liberty, are not allowed to reckon themselves as Hova, but are still considered as belonging to the division of the Mainty.

Besides the actual slaves, however, there are several tribes or classes who are as it were on the border-line between the Hova proper and the slaves. These we will briefly consider one by one.

(1) *The Zazahòva*. These are really Hova by descent, but through crime, debt, etc., they have forfeited their freedom. If redeemed or set at liberty they return to the Hova tribe.

(2) *The Manendy*. The origin of this tribe is apparently unknown. The people in speaking of them say they "*niaraka amin' tany*," i.e., came along with the land, or are autochthonous.

(3) *The Manisotra* or *Fananimanisotra*. These originally appear to have been true Hova, and their ancestors lived at Ambôhijôky, a rocky mountain some ten or twelve miles south-west of the Capital. But on the conquest of Southern Imerina, this tribe, entrenched in their rocky fastness, offered such a stubborn resistance and gave the king so much trouble, that when finally conquered he reduced them to a state of semi-servitude, transferring them at the same time to the town of Alasôra to the south-east of the Capital. The Manisotra and Manendy are reckoned as Ambaniandro and take their share of *fanompoana* with the Hova.

(4) *The Tsiarondahy*. These are the slaves of the sovereign. They have special government service to perform, such as collecting the *vodihena* or queen's beef from the markets, singing and playing music for the sovereign, forming a body-guard of spearmen in the royal processions, etc. The name Tsiarondahy is from the root *rôna*, caused to lean (*tsy arona* = not caused to lean or give way). It is not an uncommon practice for rich persons who hold a great number of slaves to give them some distinctive name by which they are marked off from all others. Often these names are of the nature of a title of honour, denoting strength, prowess in war, etc. Thus the class of queen's messengers who are chosen from among the Tsiarondahy are called *Tsimandô* or *Tsimandôa*, the full form of their name being *Tsi-mandoa-sâmbotra*, i.e., "not letting go a captive" when once seized.

I have not in this paper attempted much more than briefly to sketch the main divisions of the Hova nation as at present constituted, giving at the same time a few of the myths and traditions by which the natives themselves account for, or seek to account for, the present state of things. Probably a more extended and systematic enquiry among the old people in different parts of the country might bring to light many interesting and valuable facts bearing on the origin and history of the various tribal divisions of Imerina, which, as the older generation dies off, and the habit of depending on books and writing increases, will soon be irrevocably lost, if not collected and recorded without further delay.

H. F. STANDING.

### A REMARKABLE HAIL-STORM.

ON Saturday afternoon, Oct. 22nd, a very violent thunder-storm broke over the districts south and west of the Capital, during which houses were struck by lightning and some loss of life occurred. But at Tsîafahy, and for some distance around that place, there was also for several minutes a remarkably heavy fall of hail, the like of which few persons, foreigners or natives, remembered to have seen before in this country. Many of the hail-stones were as large as pigeons' eggs, but with sharp points; others were round or oval-shaped,  $1\frac{1}{2}$  in.  $1\frac{3}{4}$  in. long, with a depression in the centre on each side, and with rays towards the edges; others again were the size of boys' marbles, but with an opal-like veined structure. Had the rice crops been more advanced they would certainly have been entirely destroyed within the compass of this hail-fall.—ED. (J.S.)

## THE KING IN IMERINA :

A DRAMATIC FRAGMENT; ACT I., SCENE 2.\*

*Tombs in the courtyard of the Palace.**Enter the King's sister, Ralesoka, and a favourite slave-girl. Ralesoka takes an offering carried by the slave and deposits it within the chief tomb. Slave steps aside to watch.*RALESOKA (*praying*),

O great forefathers of our royal race!  
 In pity hear me from your high abodes,  
 And be my spokesmen at Creation's throne;  
 Your own quick flesh and blood within me pleads  
 For healing of this cruel barrenness.  
 O God who made me, hands and feet, and gave  
 Me heart to yearn for babes—Thou Lord of life—  
 Give also living offspring. Hear our prayer!  
 My slaves, who serve me on their bending knees  
 And stoop to cross my shadow, have their joys:  
 Their children bless them in their thrall's estate;  
 My cattle doomed to slaughter love and breed;  
 Yea, worms which crawl in refuse have their young;  
 Have pity on the Palace!

SLAVE.—

Mistress, haste!

Two men are coming from your nephew's house.

RALE.

*(listening)*

Your ears are sharp, my child; but how d'you know

They're men and only two?

SLAVE.—

I saw them there

At dusk. The southern augur's one of them.

RALE.—

There's mischief hatching then. Who's his friend?

SLAVE.—

I could not see. But they must pass the guards.

RALE.—

And so they must: our chance is at the gate.

*(Exeunt.)**(Enter Hova of Ambohimanga and Augur disguised as a slave carrying beef.)*

AM. HOVA.—O wait a bit! I've left my snuff behind.

AUGUR.—Confound your snuff, man! you can buy some more.

AM. HOVA.—O yes, and leave behind my money, then.

\* See ANNUAL IX. pp. 40-44.

*(Exit in search.)*

JR.— It's weary work to plot with men alive :  
They must be fed and clothed and housed and  
wived  
And snuffed and—hang'em ! Dead men would be  
best,  
If one could get them fairly pliable :  
Neither flabby nor yet stark.

*(Re-enter Ambohimanga Hova.)*

Now, come along !

And since you've got your snuff, let's have a pinch.  
I hope you know the password at the gate.

Hova.— It's 'Mamba'.

JR.— Go ahead then, crocodile,\*  
And keep me dark, mind.

*(Exeunt.)*

*(An owl's hoot is heard in the distance, and a similar call answers from the chief tomb. FIRINGA creeps out of the tomb, and the King appears on the terrace above.)*

J.— Well, what was it about ? But tell me first,  
Were t'not afraid ?

NGA.— Indeed I was, my lord.

J.— Of what ? The dead are harmless though they're  
kings.

— The king I was afraid of's still alive.

J.— Then speak less loud and tell thy tale. Come here.

*(Exit Firinga to reappear on the terrace.)*

What did my sister pray for ?

— Children, sire.

And as she prayed I almost turned to one  
And blubbered in my sympathy.

J.— Not strange,  
For women pray like fools when they beseech  
The heavens to multiply cares, and complain  
For more anxiety. Our house hath bred  
Enough dissension, though there be but twain  
To wrangle for its growing heritage.  
Was either of my sons made mention of ?

— No, sire. *(Full moon rises.)*

J.— No reference to our family feuds ?

— She only prayed for children ; but that prayer  
Did nearly make me—

\*ambo = crocodile.

KING.— Stop, I bid thee, stop!  
 Did any person pass this way besides?  
 FIR.— I could not see; (*The King eyes him sharply.*)  
 O yes, I heard one pass.  
 He carried beef, a present from your son.  
 KING.— The meat was very high, you smelt it, then?  
 FIR.— O no, they spoke of it.  
 KING.— The man t' himself?  
 FIR.— He spoke to one who passed him coming in.  
 KING.— I understand: the moonlight makes it clear.  
 Go summon all that sing and dance, and let  
 Some cheer be given t'encourage mirthfulness.

(*Exit Firinga.*)

The fool is lying as they all do lie;  
 The courtier lies to win a favouring smile;  
 The merchant lies to make his profit sure;  
 The beggar lies to get his dole increased;  
 The servant lies to hide his careless waste;  
 The mother lies to screen an erring child;  
 The husband lies to keep the peace at home;  
 And yet they're all good subjects: each one serves  
 With some more loyal portion of himself.  
 If kings did execute for uttering lies,  
 Themselves would have to bury carcasses.

(*Music in distance. Exit King.*)

W. CLAYTON PICKERSGILL.

#### SIMILARITIES BETWEEN SOME OF THE NAMES OF BIRDS IN THE ZAMBESI LANGUAGES AND IN MALAGASY.

IN an old number of the *Ibis*, Mr. Edward Newton says: "On reading Dr. Kirk's paper on the 'Birds of the Zambesi Region' I am much struck with the similarity between some of the Zambesi native names for birds, and those applied by the natives of Madagascar to more or less kindred species. For instance: 'Chapungo,' the Zambesi name for *Hilotarsus ecaudatus*, and 'Papango,' the Malagasy name for *Milvus egyptius*; 'Sungwe,' Zamb. for *Nectarinia amethystina*, and 'Schonwee' [Sôisôy?], Malagasy for *N. angliadana*; 'Khanga,' Zamb. for *Numida mitrata*, and 'Akanga,' Malg. for *N. tiarata*; 'Soriri,' Zamb. for *Dendrocygna personata*, and 'Tsiriry,' Malg. for *D. viduata*; the last evidently from its cry. It certainly shews the African descent of a portion of the inhabitants of Madagascar; and the language is probably kept up by occasional fresh importations of slaves from the continent."

## ODD AND CURIOUS EXPERIENCES OF LIFE IN MADAGASCAR.

THIS world of ours would be but a dull place to live in if there was no room in it for humour and fun, and if we could not sometimes indulge in a good hearty laugh. But happily there is no spot on its surface where the elements of the comic and the ridiculous are not present; and Madagascar certainly forms no exception to the general rule. We hope therefore no one will be shocked at hearing that even in missionary experiences there is occasionally a decided element of the amusing, the odd, and the absurd; anyhow, during several years' residence on this island most people come across a few curious experiences, and hear of a good many more; and if all these could be remembered and noted down, they would afford ample materials for more than one paper. This, however, is now an impossibility, but perhaps I may be able to recall enough to serve to while away a leisure half-hour; and some of these reminiscences may perchance throw a side-light or two upon certain phases of native character and habits.

One's first landing in Madagascar—especially if one has had no previous experience of a semi-civilised country—must, I think, strike most people as having some very comic aspects: the only partially clothed appearance of so many of the 'natives'; the often absurd mixture of European and other dress; and the odd gibberish, as it seems to us, of an unknown language,—all these tend to excite one's amusement.

I vividly remember my first ride in a *filanjana* at Tamatave, and how I was in fits of laughter all the way from my lodging to the Battery; the being carried in that fashion by men struck me then—I can hardly now understand why—as irresistibly comic. At that time—more than twenty-four years ago—gentlemen very often travelled from the coast to the Capital in the long basket-like *filanjana* which is never used now, nor has been for a long time past, except by ladies and children. In one of these contrivances I came up myself in October 1863; but I suspect few gentlemen would now care to run the gauntlet of the amusement and chaff they would excite by riding through Antananarivo in a similar conveyance. Yet as recently as August 1873, the late Rev. Dr. Mullens also travelled up to Imèrina in a lady's *filanjana*; but it struck him at the time as rather ridiculous, for he said how it reminded him of one of Leech's pictures in *Punch*, of a London exquisite driving a very small basket carriage, and being saluted by a street *gamin* with the words, "Oh Bill, here's a cove a-drivin' hisself home from the wash."

I referred just now to the oddness of native dress, especially when only portions of European costume are used. One sees some absurd enough sights now and then, even at the present time, in Antananarivo, but these are nothing compared with the ridiculous combinations which often met one's view a few years ago. To see a company of native officers come up from the parade ground in all their variety of dress was a very



mirth-provoking spectacle. If a hundred or two of men had been fitted out from an extensive old-clothes' shop, with the object of making every one different from every one else, it could hardly have produced a greater variety or have had a more *bizarre* effect than was actually the case. All sorts of cast-off uniforms; every kind and shape of hat, from the smartest to the shabbiest (the 'shocking bad' not excepted); every imaginable civilian dress, policeman's, fireman's, etc.—all might be seen, and in the queerest combinations, often finished off by the commonest of green and red woolen comforters. The sharp observation of a friend of mine (of the Society of Friends) even detected in an Andohàlo crowd the low-crowned 'broad brims' once belonging to some good East Anglian Quaker farmers, and pronounced that they must certainly have often figured in the sedate proceedings of "an Essex Quarterly meeting." One of the richest points in these exhibitions was the extreme self-consciousness of the wearers of these wonderful suits, and their evident pride in their personal appearance, together with the serene conviction that they were cutting a great dash.\*

In the earlier years of the residence of those of us who have lived here longest we can remember what curious notions our native friends and our house servants had about borrowing (with and without our leave) our clothes. Requests from the former to borrow one's best 'go-to-meeting' suit to wear at weddings, either their own or that of some relative, or on other festive occasions, used to be very frequent; and it took a good many refusals and a good deal of persistence before they could be got to understand that such loans were *not* congenial to our feelings. Our servants, however, did not always take the trouble to ask leave, but would borrow coat, trousers, or shirt; and we occasionally had the pleasure of discovering portions of our own dress on the back of cook or house boy, as we sat at church, or on the way home. With new servants it was a common thing to borrow a table-cloth as a *lamba*; and more than once the mistress of the house has been horrified, as her attention has wandered a little from the eloquence of the preacher, to recognise the familiar pattern of her best diaper table-linen enfolding the form of one of her domestics sitting not far from her. It is well known too that some of our washermen have made quite a business of letting out shirts, trousers, etc., as well as various articles of female dress, belonging to their English clients, to native customers for Sunday wear, and so adding to the legitimate profits of their business. In such cases also we have occasionally had the gratification of seeing at church how well our own garments have fitted native wearers of the same.

In our congregations of a few years ago there was a primitive simplicity about dress which would rather astonish us nowadays. I well remember being amused by this one Sunday at the old Ambàtonakànga Chapel. In the middle of the sermon a little boy of three or four years old, and

\* It must, however, be said that a great improvement has taken place during the last few years in all these particulars, largely through the efforts of the English officers who have been engaged in training the Malagasy army. Most of the native officers are now dressed in neat and appropriate uniforms, and very many have a thoroughly soldierly bearing; while the simple white uniform of the rank and file has replaced the cross-belts and loin-cloth which formed the sole dress of the common soldiers not many years ago.

ctly naked, came to the door and looked about to find his mother among the people closely crowded together on the matted floor of the meeting. Presently she noticed the little urchin, and taking his tiny *lamba* and lay besides her, she rolled it up into a ball and tossed it to him among the heads of her neighbours. The child quietly unfolded it and, holding it about him with all the dignity of a grown-up person, gravely returned to his place, without any one, I think, but myself taking any notice of the incident. On special occasions, however, our congregations used to turn out in gorgeous array, the ladies in silks and satins and wonderful head-dresses, and the men in black coats and pantaloons and chimney-pot hats; so that it was for some little time quite impossible to recognise one's most intimate acquaintance in their unaccustomed dress. Christmas Days were the chief of these high festivals; and I remember how, on my first Christmas Day in Antananarivo, I was very 'taken aback' on entering the dark and dingy old chapel at Anonakanga to find such a transformation scene; for instead of the white *lambas*, which did somewhat brighten up the place on ordinary occasions, my native friends seemed to be darker than ever in their dark clothes, and utterly (and comically) uncomfortable in their unusual dress. A little before my arrival here European dress was much more commonly worn by the well-to-do Malagasy than was the case after the death of Radama II., and the ladies' crinolines were, at more than one of our chapels, slipped off at the door and hung up on a nail outside in the care of one of the deacons. There were few raised seats in those days, and it was difficult to make the steel hoops, etc., lie comfortably or gracefully while their wearer was squatting on the floor. Then of course there was considerable wriggling and contriving to get into them again, as the congregation dispersed, as I have witnessed on more than one occasion. Another curious sight as people left church used to be the taking off of the pairs of boots, which gradually became too irksome to feet accustomed to such restraint, and were carried by their owners either in their hand or suspended to a stick over their shoulder. The wearer, having sacrificed his (or her) feelings to genteel appearances during church-time, would again rejoice in freedom from conventionalities on the walk home.

Primitive churches certainly deserve credit for reverence and general propriety of behaviour during divine service. In some newly formed congregations, however, curiosity occasionally gets the better of the proprieties; thus my friend the Rev. J. Pearse was once interrupted in the middle of an earnest discourse by a woman who was determined to know whether he would not sell her a smart green sun-shade he happened to have with him, and how much he wanted for it. And it was not without considerable effort and coaxing that the good lady was at length persuaded to defer her enquiries to a later period of the proceedings. During a tour to the south-east coast in 1876, I was preaching one day afternoon in the centre of a village on the banks of the River Anana, and was a little confused, when about half through my discourse, by the old chief of the place coming forward to give me a fowl—which clucked and struggled most noisily in the process—and also

a bottle of rum! which was handed up in full view of the audience. It was a little difficult to resume the thread of the discourse. This, however, be it remembered, was in a heathen village.

We were speaking just now of clothing—and of the occasional want of it—among the Malagasy. There are, however—but perhaps it would now be more correct to say there *were*—occasions happening now and then when even the natural covering of the body, the hair of the head, was not to be seen. At the decease of a Malagasy sovereign one of the customs which have been enforced up to the death of Queen Rasohèrina (in 1868) was, that every person, high and low, rich and poor, male and female (with a few exceptions in the case of the very highest personages in the kingdom), must shave the head. As may be supposed, the effect of this was most curious; one's most familiar native friends seemed totally altered and unrecognisable, for no hat or other head covering could be used. One of my brother missionaries wrote to me: "On Friday morning (3 April 1868) the people presented a very strange spectacle. They looked as if they had been suddenly transformed into Hindoos; we found a nation of bald-heads, some of them quite glossy. It was amusing to meet our friends, as in many cases we did not recognise them until they spoke to us. A man walked up into the town with me in the morning, and from his familiarity I conclude he was a man I had known very well; but I did not find out who he was, and have not been able to recall his identity since. The strangest part of the business was that the clipping was all done at once, for on Friday morning the entire country round Antananarivo was clean clipped, except some score or so of privileged Malagasy and the Europeans." At the decease of the late Queen Ranavàlona II., however, this custom was not enforced; probably it will not be again revived.

In travelling about Madagascar, a country without roads, railways, hotels, or most of the appliances of civilisation, one naturally meets with some experiences differing considerably from those which occur in going about England. "How we travel in Madagascar" has been already graphically described in a former number of this ANNUAL (No. VIII. pp. 33-42); and we need not therefore stop to speak of bearers and palanquins, or of the way in which we actually get over the ground. But there are some other points which Mr. Clark did not touch on, and these may be briefly referred to. Native houses, which we must generally use as our inns or hotels, are not as a rule at all desirable places to stay in. In the central provinces of Madagascar they are certainly dirtier and more uncomfortable than on the coast or in the forest regions, where the entirely vegetable materials employed—bamboo, traveller's-tree, or palm leaves and bark—and the greater dimensions, make the houses there very passable as temporary resting-places. But the clay or wooden houses of the Hova, Bétsiléô and other interior tribes are almost always dirty and infested with vermin; and "A Night with the Fleas," or with the rats, or the mosquitoes, or the pigs, or the poultry, or all of them put together, is one of the common experiences of Madagascar travelling. Fleas of extraordinary agility seem able to mount to the highest stretcher bedsteads it is convenient to use, and make night one long-continued

attempt to ignore their ubiquitous presence. Rats descend from the roof and perform marvellous acrobatic feats over rafters and cords, playfully running races over one's person and even one's face, with a loud squeaking and squabbling which rouses us up with a start in the few intervals of unconsciousness allowed by the lesser plagues. Mosquitoes often come in with a hum like a small swarm of bees, and unless one is provided with netting, make all attempts at sleep futile; and even if the net has been carefully tucked around one, two or three stragglers often get in and make the net a very questionable benefit, as effectually keeping in some of the tormentors as it keeps *out* their companions. Pigs being often domiciled in the house, resent their exclusion on the night of your stay, and break through the slight barriers you put up against their entrance with a grunting defiance of your intrusion into their domains; or if they do not get *into* the house, they will persist in settling down *under* it, as the floors are often raised above the ground. An equal maintenance of vested interests is shewn by the fowls, who will *not* understand that you have engaged the apartments for your exclusive use, and again and again will manage to get in to their accustomed corner, raising a terrible dust as you attempt to dislodge them. For, besides the dirt on the floors, and the blackened mats on the walls, old houses are also liberally provided with strings of soot hanging from the rafters, or from the rough upper story often formed in the roof. Such ornaments are considered by the Malagasy as an honourable distinction, a sort of certificate of an old and long-established family. But they are rather inconvenient in case of a sudden gust of wind, or a heavy shower of rain, or in ejecting a persistent hen and chickens, as just mentioned. A plentiful sprinkling of soot-flakes on bedding and clothes, on tablecloth and provisions, is of course the result of any of these incidents in your stay in many a native house.

In going about most parts of Madagascar we come now and then to some more important places, military stations and centres of districts, where Hova governors are stationed. These officials are usually very kind and hospitable, but it is sometimes very amusing to see the state and ceremony they keep up. The military force under their command is often very limited, and frequently it is impossible to get together any but a very small proportion of even the few soldiers they have at their disposal. But as soon as they hear of your approach (for it is considered courteous to send on word in advance), some of the subordinate officers are drawn up to receive you, together with as many soldiers as they can muster (often more officers than rank and file, e.g. four officers and two soldiers). As soon as you make your appearance, a great many words of command are shouted out, all in English, or at least as near an approach to that language as they can manage; the Queen is saluted, then the Prime Minister, then the governor at the place, and then the second in command, together with the playing of any music they have available and the beating of drums; and not until then it is etiquette for your own presence to be recognised and for you to be welcomed. Coming into the *riva* or government house, the governor gives you a hearty shake of the hand and, as soon as you are seated, commences a long and formal

list of enquiries, which runs somewhat as follows : "Since you, our friends and relatives, have arrived, we ask you : How is Ranavalomanjaka, Sovereign of the land ? How is Rainilaiarivony, Prime Minister and Commander-in-Chief ? How is So-and-so, Secretary of State ?\* How is the kingdom of Ambohimanga and Antananarivo ? How are the cannon ? How are the guns ? How are the Christians ? etc., etc." (Often the queries are much more numerous, including any governor higher in rank than the questioner whom we may have recently seen ; and I remember that in going round the Antsihanaka province, a little 2-pounder brass cannon at Amparafaravola was carefully enquired after.) All these enquiries must be severally and gravely replied to, including assurances of the well-being of the cannon and the guns (muskets).

Native feasts are often amusing occasions, sometimes being very lengthy and occasionally very noisy. I shall not soon forget one at Ankarana (in the Taimoro country) given in my honour. The dinner there was I think the longest, and certainly *was* the noisiest entertainment, at which I have ever assisted. It consisted of the following courses :— 1st, curry ; 2nd, goose ; 3rd, roast pork ; 4th, pigeons and water-fowl ; 5th fowl cutlets and poached eggs ; 6th, beef sausages ; 7th, boiled tongue ; 8th, sardines ; 9th, pigs' trotters ; 10th, fried bananas ; 11th, pancakes ; 12th, boiled manioc ; 13th, dried bananas ; and last, when I thought every thing must have been served, came hunches of roast beef. By taking a constantly diminishing quantity of each dish I managed to appear to do some justice to them all. The healths of the Queen, "our friends the two Foreigners," then those of the Prime Minister and chief officers of State were all drunk twice over, all followed by musical (and drum) honours. As already remarked, it a very noisy occasion, for there was a big drum just outside in the verandah, as well as two small ones, with clarionets and fiddles, and these were in full play almost all the time. Then the room was filled by a crowd of inferior officers and servants, and the shouting of everybody to everybody else, from the governor downwards, was deafening. It was a relief when the two hours' proceedings came at last to a conclusion.

A good deal might be said about the queer articles of food occasionally used by the Malagasy. Locusts, divested of their wings and legs and dried in the sun, are very largely eaten and may be seen in heaps in almost every market. Besides these, certain kind of moths are also used for food, as well as the chrysalides of various insects, different species of beetle, and even some sorts of spiders ! I must confess, however, that my information as to these delicacies is all second-hand ! I could never bring myself to try these *bonnes bouches*, so much esteemed by my native friends.

A very fruitful source of amusement (to those who have had a longer knowledge of the language) is the unavoidable ignorance of Malagasy on the part of new-comers and the absurd mistakes arising therefrom. I fear that very often we say some shocking things in preaching and public speaking during the earlier years of our residence in the country ; that we say innumerable ridiculous things goes without saying ; and

\* Other chief officers of Government are occasionally mentioned.

were it not that the Malagasy have not (at least so I think) a very quick sense of the ludicrous, and are also very tolerant to the mistakes foreigners make, our congregations must certainly during our early attempts be often convulsed with laughter. Very seldom, however, do we see any thing of the kind; and I often think that old European residents see a vast deal more that is absurd in the attempts of newer arrivals than do the Malagasy themselves. A venerable missionary, deservedly honoured especially in connection with the re-establishment of the L. M. S. Mission in Madagascar, used every Sunday to thank God that He had given us another Day of judgment! using the word *fitsaràna* (judgment) for *fitsahàrana* (rest). On another occasion he, quite innocently, used over and over again in a sermon a word which, as he pronounced it, meant something extremely offensive; at last even the Malagasy could stand it no longer, and the women began to go out; the preacher could not understand this and repeated the word with redoubled emphasis, adding, "*Aza mivoaka, ry sakaisa*" ("Don't go out, friends"), which they, all the more, would continue doing. Another brother informed his audience that God was the "midwife of all living things," using the word *mampivèlona* (*vèlona*, living), which is only used in that sense, instead of *mamèlona*, which means to support, nourish, or keep alive; the two prefixes having come to express two very different ideas. Those who were present at a Congregational Union Meeting a few years ago still remember with amusement how an earnest brother jumped up, and in a stentorian voice shouted out, "*Solika sy rano: tsy azo ampifangaro haroina izy roroa*" (i.e. "Oil and water: they cannot be mixed"), but by his putting the accent in *solika* in the wrong place he produced a most comical impression. But such anecdotes could be given almost to any extent, and similar mistakes need not be further dwelt upon.

It is well known to all who have studied Malagasy that for a long time the 'relative' form of the verb is one of the most puzzling features of the language. Several years ago, when the facilities for learning Malagasy were far less than they are now, some of us were much amused by the announcement made by a more recently arrived brother one Sunday morning, that he was "going to try a 'relative' to-day." It was evidently still a very unfamiliar form to him. Another brother, after being much bothered and perplexed by the intricacies of this '*pons asinorum*' of the language, decided upon a short and easy road out of the difficulty: he determined to stick to the active and passive forms and to ignore the annoying 'relative' altogether!

Another frequent source of queer mistakes is the difficulty, to Malagasy tongues, of pronouncing our English names. These are often so altered both in writing them and in speaking them that they become utterly unrecognisable by the uninitiated. Who, for instance, could detect under the form *Misitèritòdrinèrina*, the simple English name 'Mr. Thorne'? or in the word *Ilsàridisaonina*, the name of 'Richardson'? The names 'Briggs' and 'Jukes' and 'Sims' are less altered in their Malagasy forms, '*Biringitra*,' '*Jòkitra*,' and '*Simpitra*,' but are still funny enough. Our distinctive titles of respect, Mr., Mrs., and Miss, are very difficult for the Malagasy to distinguish; and so 'Miss Craven' becomes

'Misitera Giravy'; and 'Craven,' 'Graham,' and 'Graves' can hardly be recognised as having any difference; while 'Wilson' and 'Wills' are continually confounded together. I well remember how annoyed my wife was, during our early time of residence at Ambohimanga, by the native pastor enquiring for me as 'James.' He had heard my wife address me thus, and therefore concluded that it was the proper way for *him* to speak of me. The Malagasy have no exact equivalent for our Mr., Mrs., etc., for their name-prefixes Ra- and Andrian- are inseparable parts of their proper names. Official names also suffer curious transformations; thus 'bishop' becomes '*besôpy*' (lit. 'much soup') and '*besômpy*,' while in Betsileo it figures as '*besôfina*' (lit. 'great eared'!). Strangely too, not only are Episcopalian clergymen all styled '*besôpy*,' but their adherents also are distinguished from other Christians by the same name; each and all are 'bishops.' In the same way also students at the College are called '*kolèjy*,' and scholars are called '*sekôly*;' they are themselves colleges and schools! The French Resident soon became known in the country districts as *riandànitra*, which, literally translated, would mean 'conquered in heaven'! The name of the famous prime minister of Prussia, Prince Bismarck, has actually become a Malagasy word as an equivalent for cunning, craft, in the form of *bizy*: '*manao bizy*' is 'to act craftily.' This phrase originated in the time of the Franco-Prussian war, when the fame of Bismarck first reached this country.

While speaking of words introduced by Europeans into the Malagasy language, a word or two may be said about other proper names, chiefly Scriptural ones, which have become thoroughly naturalised here. Many of these have taken curious forms, and this chiefly arises from the fact that *oral* instruction came first, some time indeed before these Bible names had to be printed. It would appear as if the first missionaries, in conversing with the Malagasy about the Saviour of the world, had very naturally spoken of Him by the same name, pronounced in the same way, as that which they and all English-speaking peoples use. They apparently did not consider what would be the most correct form of this sacred name, as well as of other names, that is, the nearest representation of their Greek originals. And so the English form 'Jesus Christ' came to be '*Jesôsy Kraisty*' in Malagasy, a tolerably close reproduction of our pronunciation of it; while '*Jeso Kristo*' (or '*Jesu Kristo*') would no doubt have been more correct. In the Revised New Testament, '*Kristy*' has been substituted for *Kraisty*, but the older pronunciation holds its own. In some of the books formerly issued by the Jesuit Mission, the French pronunciation of the Redeemer's name was phonetically reproduced thus, '*Jeso-Kry*'! but in their later publications the spelling of the sacred name has been approximated to that employed in Protestant books. Other curious words which have now become naturalised in Malagasy are Jews (*not* 'Jew'), written '*Jiosy*' and pronounced exactly like 'juice,' and Gentiles (*not* 'Gentile'), written '*Jentilisa*;' so that the Malagasy speak of *one* Jews, and of *one* Gentiles!

Many English names have become naturalised among the Malagasy, especially the names of some of the missionaries resident among them. Thus we find Rajaonsona (Mr. Johnson), Raolisona (Mr. Wilson), and

Rasoelina (Mr. Sewell). On one occasion a missionary was conducting service at a country chapel, and at the close was requested to baptize an infant. On asking the name of the child, he was startled and not a little confused by the parents giving *his own name* (Christian and surname included) as the one he was to give to the young neophyte. One of the oddest names I have heard of is Radèboka, which I am assured was taken from the title of the 'day-book' which the parents had seen in the Hospital! Another odd name is Ramosèjaofèra, in which we have, first the native name prefix *Ra*, then the French '*mon-sieur*,' altered to *mos*, and finally the native name *Jaofera*. An absurd mistake arising from ignorance of Malagasy is perpetuated on the title-page of a Malagasy vocabulary published in England some years ago, but prepared by three young native officers, one of whom has been for several years past governor of Tamatave. The English editor apparently intended to describe it as "*a book* (Mal. *boky*) written by Rabezàndrina" and his companions; instead of which it reads, "*Boka no anarany Rabezandrina*," etc. etc., which is literally, "Lepers are the names of Rabezandrina," etc. The three authors were long known to some of us as "the three lepers."

But it is not the Malagasy only who make absurd mistakes about names unfamiliar to them. It is known to many in England who have friends in Madagascar that the name by which we missionaries and other foreigners are designated by the natives here is 'Vazaha.' But a worthy minister in England, who had got hold of the term, slightly mistook its exact meaning; and, supposing it be the name of a division of the Malagasy people, he gravely informed his hearers at a public meeting that "the Vazaha are a tribe in Madagascar who are still but imperfectly acquainted with the Gospel!" Many native customs strike us as very odd, and doubtless, not less so do many of our customs appear to the Malagasy. Thus they are accustomed to employ the points of the compass in speaking of the positions of things in the house, where we should say, 'to the left' or 'to the right,' or 'in front of you' or 'behind you.' One of my brother missionaries was once dining with a native friend, and while eating some rice, a portion happened to adhere to his moustache. His host politely called his attention to the circumstance, and on my friend wiping the wrong side, his entertainer cried, "No, no! it's on the *southern* side of your moustache!" It sometimes takes a little time for our Malagasy friends to understand *our* ways. Thus I remember that when living at Ambohimanga we were visited one day by an old friend who happened to be then staying at the ancient capital. After a little conversation my wife brought out a good-sized plum cake, and cutting a slice or two offered it to him. To her great astonishment he quietly took—not a slice—but, the whole of the cake! and commenced eating it. But finding himself, after a little time, rather embarrassed by its quantity, and that it was a good deal more than he could then comfortably manage, he gradually stowed it away in his pockets, remarking that his children would like it. We altered our way of handing cake to native friends from that date.

The native custom of giving and expecting bits of money on all imagin-



able occasions seems very odd to Europeans. At births and marriages, at deaths and funerals, when ill or when getting better, at the New Year, when building a house or when constructing a tomb, when going on a journey or on returning from one, in times of joy or in times of sorrow—at each and all of them these wretched little bits of cut-money are expected from visitors. It is true that at funerals a return is made in the shape of presents of beef; and the solemnities of death and mourning are mixed up with the—to us—very incongruous elements of the slaughter-house and the butcher's-shop. But if one leaves before the oxen are killed, a present of poultry instead of beef is made; and I have more than once come home from a funeral, or, at least, from the preliminary 'lying-in-state,' with a goose or a duck dangling from the poles of my palanquin.

Some curious things are seen by those who travel much about Madagascar in the way of church decoration. (I am here, it should be said, speaking almost exclusively of buildings erected by congregations in connection, at least nominally, with the L.M.S.) When it is remembered that these number more than 1200, and are scattered over a very wide extent of country, some missionaries having as many as 70, 80, or 90 of these under their nominal charge, it will be clear that to only a very small proportion of them can he give any personal attention or advice as to their construction and adornment. As it is, it is only in the case of the villages nearest to his station, and here and there at important centres, that an English missionary can do much to guide and advise country church builders. The majority of village churches are therefore entirely the product of native skill, and their decoration the outcome of native taste. In many cases, especially in some of the districts nearest to Antananarivo, the village churches are models of what such places should be; and with their glass windows, their neatly coloured interiors, and well-made platform pulpits—sometimes elaborate structures of massive stonework—they do credit to the simple country people who have built them. But it cannot be truthfully said that the majority of Madagascar village churches are of this kind. By far the greater number of them are rough structures of clay walls with sun-dried brick gables and thatched roofs; and their only furniture a raised platform of earth or brick, with a rough table serving both for pulpit and for the Communion, a clumsy form or two for the singers, a few dirty mats on the floor, some lesson-sheets on the walls, and perhaps a black-board for every-day school use. There is certainly no fear at present of the majority of our congregations being led astray by æstheticism in religious buildings or worship.

But frequently there are at the same time some attempts at decoration, and these are often very incongruous and occasionally highly comical (though doubtless unintentionally so). In a little church away north, and otherwise very neatly finished, is a band of ornament round the walls which is exactly like the figures on an ace-of-clubs card, and has probably been copied from this. In other places figures of officers and soldiers marching and even fighting are prominent; in others are seen sportsmen firing at impossibly big birds perched on trees; in others

again (as in the former Antsahamànitra church at Ambòhimanga) a large tree is conspicuous behind the pulpit, bearing tremendous pumpkin-like fruits. (In this same church, however, there were also some very tasteful groups of flowers painted on the keystones of the window arches.) In the church at Vòhipéno (Matitanana) I remember that the front of the pulpit was decorated in the following way: part of the space was occupied by a picture of a European ship with two masts; the other part had a church with a tall tower and spire; over these was the legend, "*Hoy isay tompony ity trano ity: Matahora*" ("Says the lord of this house: Fear"); and there were also four birds and a coloured border. Figures of clocks are frequently seen, and also those of a spear and shield, whether with any reference to "the shield of faith" and other Christian armour, I cannot say. It is worthy of note that no example of symbolism or sacred monograms or emblems has ever come under my notice, although passages of Scripture are now not unfrequently painted on the walls of village churches. Trees with fruit and flowers, often showing some taste, are seen in many places; and in one or two cases a very effective decoration has been formed by painted sprays of leaves or flowers scattered over the wall, giving the effect of a simple diaper or wall-paper pattern. (A unique example of a tasteful piece of wall-colouring is described more fully in ANNUAL III. p. 72.)

During a tour I took in 1874 round the Antsihànaka province with Dr. Mullens and Mr. Pillans, we were much amused by the variety of the receptacles used at the doors of the village churches for the weekly offerings of the congregations. In one district old sardine tins were the favourite article employed; further on we found that Morton's jam tins were most in vogue; while in yet another district old tin flasks formerly filled with gunpowder were in greatest request for the purpose.

In certain Malagasy village churches (not very many we should hope) some very curious additions to the ordinary furniture have been seen by occasional visitors. The wish of the late Queen that her subjects should worship the true God was in many places interpreted by petty officials as giving them authority to force the attendance of the people, and to punish them if they were negligent. The command, "Compel them to come in," was in fact often very literally carried out. Traveling down to the Betsileo province on one occasion, Dr. Davidson, while stopping for his mid-day meal at a country chapel, noticed a good-sized stone near the door, the object of which much exercised his mind. On enquiring the use of this stone, he was told that if the people were negligent of the 'means of grace' and did not attend service regularly, they were seized and obliged to carry the stone to the top of a neighbouring hill and down again, to punish them for their sins and remind them to be more diligent in future. Another kind of penance used to be enforced at Tsialàhy: people who were irregular in attendance at chapel were obliged to creep on their hands and knees round the *fàhitra* or ox-fattening pen in the village, as a punishment for inattention to their religious duties. At a country chapel in the Friends' District, Mr. H. E. Clark saw on one occasion a deacon sitting at the door with a handful of small pebbles. When this official

noticed any one in the congregation asleep, or inattentive, or inwarrant, he threw a pebble at the offender to rouse him up, or as a gentle reminder to be more careful.\*

Much that is amusing might be noted with regard to native preaching: odd illustrations, strange misapprehensions and misapplications of Scripture, curious answers to questions about Biblical subjects, etc., but my space is more than filled up. Perhaps at some future time something more may be given on these points; and I wish that some one who has noted such incidents more fully than I have done would favour us with his reminiscences. Enough has I hope here been said to justify my remark at the commencement of this paper, that the monotony of our daily routine is frequently enlivened by curious and comic occurrences, and that, together with the more serious duties of our work, there is often "a decided element of the amusing, the odd, and the absurd" in our life in Madagascar.

JAMES SIBREE, JUN. (ED.)

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### VARIETIES.

#### *A PROVIDENTIAL DELIVERANCE ON THE COAST OF MADAGASCAR FIFTY YEARS AGO.*

THE following narrative was sent to my father several years ago by one of the sea-faring members of his congregation at Hull; and thinking it will not be uninteresting to the readers of the *ANNUAL*, I transcribe it herewith for their perusal.—ED. (J.S.)

Many years ago, I think it was in the year 1835, my brother was second mate of the brig *Emulous* of London, Captain Welbank, trading between Calcutta and Mauritius. At the time to which I allude they were lying in the harbour of Port Louis, waiting for cargo. The captain was very fond of fishing, and in order to indulge in his favourite amusement he had one of the small boats fitted with sails, in which he, two or three times a week, went outside the harbour for a day's sport. In these excursions my brother, a foreign seaman, and a boy, invariably accompanied him to work the boat, taking with them provisions for the day. Ships employed in the southern trade are always provided with small casks called by sailors 'breakers' (a corruption, I apprehend, of the Spanish '*barrico*'), which are used for fetching water, being easily carried from the springs to the ship. It was their custom in these fishing excursions to put half-a-dozen of these breakers into the boat, and to fill them with salt water to serve as ballast. On the particular occasion to which my story refers, the breakers were all full of *fresh* water. My brother had given orders to empty them into the tank, but the captain, being anxious to get away, countermanded the order and told the men to lower them into the boat as they were. Was that chance? No, the hand of Providence was visible there; but there is more to come yet.

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\* It need hardly be said that all true missionaries utterly repudiate and denounce all such ways of promoting Christianity.

They pushed off from the ship with light hearts, anticipating nothing but pleasure. They had not got many yards from the ship, when a little dog belonging to the captain came to the gangway and whined piteously to be taken into the boat. At first the captain was not inclined to take him in, but he altered his mind, and they turned back and took the animal with them.

They proceeded out of the harbour but had no luck; they caught no fish, but the captain being anxious to get something, kept on until the day was too far spent to get back to the ship before late in the night; but that was thought lightly of; the weather was fine and warm, and a night passed in the boat was no great hardship: so they let go their grapple under the lee of a rock called the Gunner's Quoin (from its wedge-like shape), made a tent of their mainsail, disposed of the last of their provisions, made themselves as comfortable as they could and went to sleep, intending to go back to the ship at daylight. But they did not: in the middle of the night they were awoken by the uneasy motion of the boat; they found it was blowing a gale, and the boat drifting fast from the land. They got their sail close reefed and endeavoured to work up under the land, but they were too late, the sea was every minute getting higher, and their frail craft, 15 feet long, in great danger of filling; they therefore did the best thing they could under the circumstances: they lowered the sails, made the mainsail fast to the boat's painter and put it overboard for what in sea parlance is called a 'drogue,' to keep the ship's head to the sea, and anxiously waited for day. But they had more trouble in store; the wind moderated towards morning, but, just as they were about to get in the sail from the water, the rope that held it broke, and they lost their best sail, therefore beating up again to the island was out of the question. The only thing they could do was to try to get to the island of Bourbon, distant about a hundred miles; but having lost their best sail, the boat would not keep very close to the wind, and they passed the island far to leeward.

Their position was now becoming alarming; they had no food, but they had plenty of fresh water; Madagascar, their only refuge, was 500 miles off, but they must reach it or die. They therefore shaped their course as well as they could, by the sun by day and the stars by night, having no compass in the boat. Then came the pangs of hunger; they bore it long, but at last the poor dog must die to keep them alive. For ten days after passing Bourbon, the dog furnished their only food. At the end of that time they sighted the extreme south end of Madagascar, and then the wind failed them. But they were not forsaken: He who notes the fall of a sparrow had them in His keeping. My brother said he never knew how they got the boat ashore in their exhausted state, but they did, and they landed safe on the beach. They had not been long there when three native women came down to the shore, and seeing their exhausted condition, semi-savages though they were, instantly procured them food. Their arrival in the country was soon made known to the authorities of the district, and they were brought before one of the chiefs to give an account of themselves; but they were soon acquitted of any hostile intentions, and their forlorn condition exciting the sympathy of the natives, they were soon made comfortable. My brother spoke in glowing terms of the kind treatment they received from these uncivilised islanders. As soon as the chief thoroughly understood their requirements, he provided them with an escort of eight men and a canoe, which they carried on their shoulders over the land, and used it when they could on the lakes, for a distance of 450 miles to Tamatave, the journey occupying eleven days. It was the custom of the inhabitants of the villages where they remained for the night (and they could only travel while the sun was, up on account of the alligators) to vacate one of their houses and give it up entirely to the strangers, so that when they were refreshed with abundance of good food they were left in the undisturbed possession of their dormitory until the morning. Arriving at Tamatave, they

embarked on board one of the bullock schooners then trading between Madagascar and Mauritius, and, to the surprise of all, got back to their ship after an absence of thirty-two days.

JOHN HARVEY.

#### THE 'FANATAOVANA.'

THOSE of us who have long dwelt in Madagascar must have frequently noticed in various parts of the country those heaps of stones, or, if near forests, piles of bracken, branches of trees, moss, etc., known as *Fanataovana*. These have been formed by passers-by depositing a stone, or whatever the article may be, in order that they may have success in their journeys and undertakings. Reading Thomson's interesting and thrilling book *Through Masai Land* a while ago, I was interested in finding (p. 485) that a similar practice prevails in the eastern parts of Africa, and doubtless in other countries too. He says: "The connection of the natives of Upper Kavirondo with the latter (East African negroes generally) is illustrated (and that very markedly) by their habit of throwing sticks, stones and grass into heaps at particular places, such as boundaries, with the idea of propitiating some guardian spirit. This custom prevails all through the countries southward to Nyassa."\*

R. BARON. (ED.)

#### EARTHQUAKE SHOCKS.

As a country showing numerous traces of volcanic disturbance (probably not of a very remote date), Madagascar is almost every year visited by shocks of earthquake. Happily these are not of a severe character, and little, if any, damage is usually done. Several slight shocks have been felt during 1887, mostly in the earlier months of the year; the most distinctly felt of these occurred on the afternoon of Monday, Feb. 7th, and was accompanied by a strange subterranean roar and a tremor of several seconds' duration. To many persons it appeared as if the earth-wave came from the west or north-west and passed away to the east and south. Slighter shocks were felt on the 11th, 12th and 14th of the following April, some of them occurring in the night. The Malagasy still remember a rather severe earthquake shock which happened many years ago, and which is said to have detached a large mass of rock from the cliffs on the precipitous west side of the ridge on which Antananarivo is built.

Eight years ago a very severe shock was experienced in the district of Vonizongo, 40 miles N.W. of Antananarivo, following one of a less alarming kind a fortnight previous. These are thus described by the Rev. E. H. Stribling, then residing in the north-western part of the district. He says:—

"During the past year (1879) two shocks of earthquake have been felt in Vonizongo, the latter one far surpassing the first in severity. It is noticeable that fifteen days elapsed from the occurrence of the first shock to that of the second and heavier one. It was at half-past 7, a.m., on Sunday morning the 31st of August, that the shock was felt at Fiarèna, lasting for more than twenty seconds, and alarming all by the shaking of the windows and lighter furniture which accompanied it.

"The most severe shock of earthquake probably known in Madagascar for at least a generation past occurred on Tuesday, the 16th September 1879, at 2-10 p.m., lasting for at least thirty seconds. At the instant of its occurrence, I was just leaving Ankàdimaito (in the Valàlafotsy district), a village about 2½ days' journey south west of Fiarèna. This village (as its name may imply, 'At the broken fosses') is an extraordinary one, being nearly surrounded by

\* Exactly the same custom is found in Sumatra and in Timor; see Forbes's *Naturalist's Wanderings in the Eastern Archipelago*; pp. 166 and 481.—ED. (J.S.)

several moats, thirty feet deep by twenty wide, the bridges and paths between which are extremely narrow; while the whole surroundings of Ankadimaito resent an unusual appearance of unsubstantiality, and it is one of the last places in Madagascar one would flee to for refuge from an earthquake. The three days previous to the shock had been almost unbearably sultry, although the usual hot weather had scarcely set in. The morning of the occurrence was one of the hottest I have experienced in Imérina, a peculiar haze hanging over the country. It was on leaving the village of Ankadimaito, accompanied by several of the congregation, and while still proceeding along one of the narrow paths leading between two of the wide and deep trenches, that we suddenly heard a rumbling sound, as of violent thunder. The great shock was now upon us as in a moment, and truly terrific was it in its effects. My native friends with me at the time seemed as if instantaneously paralysed with amazement; and although still on the narrow path, there they stood immovable, awaiting, as they doubtless supposed, the inevitable destruction so shortly to overtake them. But I at once proceeded at a double-quick pace to gain the open plain, in case of a general collapse of Ankadimaito with its numerous moats and trenches. The shock was so severe that as we gained the plain we beheld the moats to the east and south enveloped in one mass of smoke-like dust slowly ascending from the falling *débris*. The effect upon all present was an anticipation of swift and unavoidable destruction.

"The Malagasy are a people who soon forget their fears, and proceeding along to the east, we passed the village of Itsiázompaniry, about 1½ hour distant. Here we heard that three shocks had occurred since 2 o'clock, although one only was felt at Ankadimaito. We now proceeded by the north-east towards Ikankaolo, a village named after the remarkable and lofty black rock close by. As we passed by the west of Ikankaolo, several of the palanquin bearers remarked upon the unusual appearance of the ground, saying, "Surely this is broken by the earthquake." And as we passed over the ground, for more than about two hundred yards we found it literally split up by the severity of the recent shaking. At about 8 o'clock, a fresh shock occurred, severe enough to shake the house in which I was staying and send me quickly out of doors for safety. Very lightly indeed did I sleep that night, and I began to wish myself again on shipboard upon the ocean, which, to my imagination, presented more security than the quaking earth.

"It was at about 7 a.m. on the Wednesday that the last shock was felt, which proved considerably less severe. After our service in the little chapel at Ikankaolo, I proceeded on my way towards Fiarenana, where the earthquake appears to have been much the same in severity; although I was thankful to find on arrival home that our mission premises had escaped uninjured."

#### JOTTINGS ON MALAGASY AND MALAYAN AFFINITIES.

OSCAR Peschel, in his *Races of Men* (pp. 355 and 356), remarks upon "the use of the feather bellows nowhere else but in the Malayan islands, except in Madagascar. Dr. E. Tylor therefore seems justified in his impression that the colonisation of Madagascar took place only after the working of iron was practised in the Sunda Islands (see *Early History of Mankind*, p. 215). In connection with this circumstance it is noticeable that the Hova breed the Zebu or Indian buffalo, although the indigenous cattle of Madagascar are like the African species. (Schweinfurth has, however, shown that the buffalo occurs in every part of the Soudan; see *Heart of Africa*, vol. i., p. 160.) If with this we connect the fact that the inhabitants of the southern coast of Ceylon and of the Maldives speak the Malayan language, this throws some light upon the way in which the ancestors of the Hova reached Madagascar."

In the Serwatty Islands (Malay Archipelago) bullocks are slaughtered in large numbers at affairs of importance. The inhabitants preserve with care the relics of their ancestors; and at the death of their chiefs their bodies are deposited on platforms in the forest and are allowed to decay. When they cease to be offensive they are deposited under the roofs of their houses.

On the similarities between Malagasy and Malayan words, see Banks, in Hawkesworth's *Discoveries in the South Sea*, 1773; Hervàs, *Catalogo de la Lengues*, Madrid, 1800; and W. von Humboldt, *Kawisprache*, 1836.

ED. (J.S.)

THE MALAGASY WORDS FOR 'FISH' AND 'CANOE' ('LAOKA' AND 'LAKANA').

WHAT does the word *lakana* in Malagasy mean? or, rather, what did it originally mean? We all know that it now means a canoe, made by hollowing out the trunk of a large tree, but what is its etymology?

We have another word in Malagasy which somewhat resembles it, viz. *laoka*. This in Imèrina now means any additional food or relish taken with rice (which is the staple food, the staff of life, of the majority of the Malagasy tribes) in order to make it more palatable. Here in the central province *laoka* means either meat, fish, shrimps, or even vegetables; but on the coast it appears to be almost exclusively applied to *fish*;\* and there can hardly be any doubt that this is the original meaning of the word.

In the various Malayan, Polynesian and Melanesian languages we find the root *ak* in any number of modifications, as *ak, ok, aka, ika, ikan, ig, iga, ige, eg*, etc., and all of them having the meaning of 'fish'; and there can be no doubt at all that the Malagasy *laoka* (fish) is only a further expansion of the same root. The prefixed *l* (or *la*) is evidently only the demonstrative particle *la* or *le*, which we meet with in words like *ilay* and *ilthy* (or *lthy*), 'that one.' That demonstrative particles are used in forming secondary roots from primary ones is a fact familiar to every scholar, although it does not occur so often in the agglutinative languages as in the inflectional ones.

If we now turn to *lakana* (provincial, *laka*), we evidently meet the same root, in a similar number of variations, in the cognate languages; e.g., *ak* (very frequently), *ok, aka, eka, og, vaka, haka, laka, faka*, etc., and always having the same meaning of a canoe or a boat. The primary root here is also *ak*, to which are prefixed the demonstrative particles *ha, la, va, fa*, etc. Now is there no connection between the *ak* which means 'fish,' and the *ak* which means 'canoe?' I have not the means of following up the question fully, but I have no doubt that the two forms *ak* are identical. Perhaps both of them point back to a verbal root *ak* (to move, run, swim?); at any rate the idea of 'fish' is an earlier one than that of 'canoe,' as people no doubt had seen a fish before they could make a canoe. And having once fixed the sense 'fish' to the root *ak*, it was quite natural that they should call a canoe by the same name; for what, after all, is a canoe but an artificial fish? But in the course of time the forms were gradually modified to some extent, so as to make it possible (at least in some of these languages) to distinguish the name of a fish from the name of a canoe.

L. DAHLE.

Note.—The forms *ak, ik* certainly remind one of the Greek *ichthys*; but this is, I suppose, only an accidental similarity.

\* There is, properly speaking, no distinctive word for fish in the interior of Madagascar, as the one in common use—*hàsandrano*, a combination of the words *hàsa*, anything obtained by hunting, and *ràno*, water—is very wide in its meaning, and is applied to other living things besides fish, as shrimps, crayfish, crabs and molluscs.

## OF SUMMARY OF IMPORTANT EVENTS IN MADAGASCAR DURING 1887.

**POLITICAL.**—Our usual brief record of important political is briefer this year than usual, there has happily been little of importance to record. When we noticed the evacuation of Tamatave by the French in January, the visit of the British Consul to the Capital in June, the return of the Malagasy Embassy from France so that of General Willoughby to Europe, the temporary withdrawal of the French flag (on account of differences of opinion between the Resident-General and the Government with regard to the *equaturs* of foreign consuls), the arrival of M. Larrouy, the new Resident-General, and the dismissal of the Secretary of State for Foreign Affairs—we have nearly noted all the items of interest this head. Happily the political outlook is peaceful; long may it continue so!

Under the head of semi-political events, we must, however, record the historic celebration of the Jubilee of our Majesty Queen Victoria, the visit of the British community of Antananarivo on Wednesday the 22nd of

By the kind permission of our Majesty the Queen of Madagascar, the Royal Gardens at Mahàzoar were lent for the occasion; and a number of the *élite* of Malagasy society, including His Excellency the Prime Minister, as well as foreign and all nationalities residing in the Capital, accepted the invitation of the committee having the management of the festivities. Luncheon and refreshments were provided, and instruments of various kinds were played, the gardens were prettily decorated, and a very pleasant day spent in honour of the Jubilee.

**SOCIAL AND COMMERCIAL.**—During the latter part of this year the line of Electric Telegraph connecting Tamatave and Antananarivo has been completed; and on Thursday, Sept. 15th, the chief port of Madagascar and the Capital were put in telegraphic connection, and messages were interchanged for the first time. The line has been constructed by a French company, the Malagasy Government supplying the posts and other timber; and a year after the line is in working order, the Government is to take it over on the payment of \$ 20,000 to the French.

**ROADS AND PATHS.**—In the earlier months of the year, as soon as the rainy season was fairly over, a great deal of activity was shown in all parts of the central province of Imérina, in improving the roads and paths. We do not mean to say that any roads—paved or macadamised in European fashion—have been constructed; but the previously existing foot-paths—mere tracks of a few inches broad—crossing the country in all directions, have been widened by clearing away the grass for five or six feet in width; the steeper ascents and descents have been made somewhat less difficult; and in some cases embankments have been formed over wet and boggy ground, although no bridges have (we believe) been built. Madagascar is still some centuries behind most civilised countries as regards the means of internal communication, but this year a little advance in the right direction has certainly been made.

**RIVER EMBANKMENTS.**—During the months of July and August a large proportion of the population of Imérina left all other oc-



cupations and assembled in vast numbers, in obedience to the royal proclamation, on the banks of the river Ikopa, in order to heighten and strengthen the embankments on each side of the stream. For some years past these great works, carried out by former sovereigns, have been getting more and more defective; and on account of the gradual rise in the bed of the river, their height has been insufficient to hold the great mass of water which is poured into them during the heavy rains of the wet season. It had therefore become a matter of national importance to strengthen these great banks, and so to prevent the disastrous floods which have become rather frequent of late years, and have often destroyed thousands of acres of growing rice. Every kind of business and all teaching was therefore ordered to be stopped. The Queen and her Court went out to the river, and Her Majesty herself carried sods and stones and laid them in their place to inaugurate the work; and, subsequently, the Queen and Prime Minister and a large following of attendants left the Capital for about three weeks to inspect the works, encamping in various places along the river side, from near Alasóra, to the south-east, down to a considerable distance north-west of the Capital. The new and white lines of embankment stretching along the river sides for many miles can be quite clearly seen from the upper part of Antananarivo, and their broad tops form fine roads for walking or horse exercise.

It is a matter for great regret that grog shops, where drinking and gaming are carried on late at night, are now to be seen in considerable numbers in various parts of the Capital; these are chiefly kept by foreigners, and drinking habits as well other immoralities are certainly greatly on the increase among the Malagasy themselves. It is much to be wished that by licencing or some other method some restraint

could be put upon this uncontrolled trade, which is now doing so much to demoralise the people and neutralise the benefits of education and Christian teaching.

Trade has been for many months past in a very depressed condition, money has been scarce, and there has been little inducement for any speculation or enterprise.

LITERARY.—REVISION OF THE MALAGASY BIBLE. During the early part of the year this great work, which has been carried on more or less continuously for more than 13 years, was brought to a completion; and on the 2nd of May a largely attended meeting was held in the Ampamarinana Memorial Church to celebrate the event and to give thanks for the successful termination of the work. The Rev. W. E. Cousins, the Chief Reviser, is now in England engaged in carrying through the press the first editions of the Revised Bible and of the New Testament.

GEOGRAPHICAL.—"M. le Myre de Vilers, Resident-General of France at Madagascar, having learned that the Rev. Father Roblet, Jesuit Missioner, had made considerable topographical researches in the provinces of Imérina and Bétsiléo, sent one of his secretaries to look carefully into the matter (see pp. 341, 342, *ante*). On the notes which were supplied to him, M. le Myre de Vilers addressed a report to the Topographical Society of France, in consequence of which the Society has awarded an exception to our indefatigable topographer, who has reflected honour alike on science and on France. His reward, the highest after the great medal of honour, was proclaimed on the 7th of November in the General Assembly of the Society of Topography of France and the Sorbonne."—*Annals of the Propagation of the Faith*; May 1887.

A NEW SURVEY OF ANTANANARIVO.—It is now 50 years ago since the Capital of Madagascar was surveyed for the first time. This was

the late Mr. James Cameron, M.S.; and a map, to a small was drawn, which was first ed in Mr. Ellis's *History of Mascara* (1878), and has been three times reproduced with additions. The city, however, increased very considerably the last fifty years; and we had to see that some of the officers connected with the Residency have for some past been engaged in making a map of Antananarivo. We hope the result of their labours will be published, so as to be accessible to the general public, for numbers of officers as well as of the native inhabitants would doubtless be glad to have in a handy form, a map of the city.

EDUCATIONAL.—On Tuesday, 10th, an attempt was made by the editor of the monthly publication *Ny Fiangonana sy ny Sekoly* (E. Clark) to obtain accurate statistics of the number of scholars in the various Protestant schools and other educational establishments in the Capital, including the Palace School, Colleges,

High Schools, etc., and also of those in actual attendance on that day. At the foot of this section is a summary of the results obtained.

Although it is pleasant to know that between two and three thousand children and young people in the Capital are regularly learning, yet these numbers are far from satisfactory when the large population of Antananarivo is remembered. There are probably not fewer than 100,000 inhabitants in this city; and applying the same rule here as in England, that one-tenth of the total population should be in school, and adding perhaps a fifth of these figures as the numbers in attendance at the Roman Catholic schools ( $3327 \times 665 = 4392$ , and  $2387 \times 477 = 2864$ ), we see that the numbers who are regularly learning are a good deal under a third of those who should be in school.\* It is evident therefore that the laws about putting children to school are evaded by a large number of the inhabitants of Antananarivo, and that much still remains to be done in popular education in the Capital of Madagascar.

<i>Society</i>	<i>Numbers on Books.</i>	<i>Numbers present.</i>
In connection with the L.M.S. and F.F.M.A.	2847	1948
" " " " S.P.G.	336	320
" " " " Norweg. M.S.	144	119
	<u>3327</u>	<u>2387</u>

ARTURE OF MISSIONARIES.—Our space will only allow us (instead of a fuller notice we had written) to make the simple record of the departure from Madagascar this year of the Rev. L. Dahle, N.M.S., and of E. Clark, F.F.M.A., both of whom are well known to all readers of the *AL* by interesting articles, and as having written numerous and valuable works in the native language. We can ill spare such men from our midst, and regret that at present there seems little hope of either Mr. Dahle or Mr. Clark returning to this country.

It should be remembered also that in the case of the higher schools and colleges, a large proportion of their scholars are not usually resident in the Capital, but are from the country, so that the attendance from the city is still further reduced. On the other hand, it is evident that the proportion of scholars to total population must be put much lower in Madagascar than in England, on account of the far smaller number of children as compared with adults. A one-twentieth might be the proper ratio; but even this is far from reached.

## BOTANICAL AND NATURAL HISTORY NOTES.

FURTHER CONTRIBUTIONS TO THE FLORA OF MADAGASCAR;

BY J. G. BAKER, F.R.S., F.L.S. [READ 18TH NOV. 1886.]

"SINCE I last reported to the Linnean Society on the Flora of Madagascar, in the session of 1884-85, two large boxes of plants have been received from the Rev. R. Baron, F.L.S. One of these, owing to the unsettled state of political affairs in the island, did not reach us for more than a year after the letter announcing it came to hand, so that we had quite given it up for lost. These two boxes carry up his collecting numbers to nearly 5000. The present paper contains descriptions of the principal new genera and species included in these boxes of which the specimens were sufficiently complete. There appear to be seven new genera—one in Menispermaceæ, one in Geraniaceæ, two in Melastomaceæ, one in Rubiaceæ, and two in Compositæ. The species are distributed through the primary divisions as follows, viz.:—Thalamifloræ 51, Calycifloræ 48, Gamopetalæ 93, Incompletæ 31, Monocotyledons 27, Vascular Cryptogamia 5.

"As before, the great bulk of the new species belong to the large, well-known, widely-spread tropical genera, such as *Garcinia*, *Hibiscus*, *Begonia*, *Vernonia*, *Vitis*, *Ficus*, *Piper*, and *Cyperus*. Of characteristically Cape types we have *Pelargonium*, *Stoebe*, *Belmontia* and *Cineraria* added to the flora of Madagascar, a second species of *Crassula*, several fleshy-leaved Kleinoid *Senecios*, and a curious dwarf *Aloe*, allied to the Cape *Aloe aristata* of Haworth. Of familiar European genera we have *Celtis* and *Deyeuxia* added, and new species of *Nasturtium* and *Ajuga*. Of the endemic Madagascar genera we get new species of *Asteropeia*, *Rhodolana*, *Dichæanthæra*, *Veprecella*, *Gravesia*, *Kitchingia*, *Dicoryphe*, *Oncotemum*, *Mascarenhaisia*, and *Dypsis*. There is nothing materially fresh affecting the relations of Madagascar to Tropical Africa, Mauritius, and Bourbon. The feeble affinity of the Madagascan to the Indian and Malayan flora is strengthened by the discovery of the genus *Cyclea* and of new species of *Alyxia*, *Didymocarpus*, and *Strobilanthes*. Of types of certain or possible economic interest, we have species of *Dalbergia*, *Macaranga*, and *Strychnos*, two species of *Commiphora* (*Balsamodendron*), and four of *Garcinia*. A curious Euphorbiaceous plant seems to belong to the American genus *Pedilanthus*, but the material is incomplete.

"For convenience of reference I give herewith a list of recent papers which have appeared in English periodicals, in which new or imperfectly known plants from Madagascar have been described:—

	Gen. Spec.
1876. Ferns collected by Mr. and Mrs. William Pool.	
Baker, <i>Fourn. Linn. Soc.</i> xv. p. 411 .....	26
1877. Ferns collected by Miss Helen Gilpin.	
Baker, <i>Fourn. Linn. Soc.</i> xvi. p. 197 .....	21
1879. Flowering plants collected by L. Kitching.	
Baker, <i>Fourn. Linn. Soc.</i> xviii. p. 264 .....	2 33
1880. Ferns collected by L. Kitching.	
Baker, <i>Fourn. Bot.</i> 1880, p. 326 .....	13
1880-85. Endemic genera figured in <i>Icones Plantarum</i> :—	
<i>Micronychia</i> , Oliver, t. 1337; <i>Epallage</i> , DC. t. 1394;	
<i>Rhaphispermum</i> , Benth. t. 1402; <i>Cardiochlamys</i> , Oliv.	
t. 1403; <i>Bembicia</i> , Oliv. t. 1404; <i>Xerochlamys</i> , Baker,	
t. 1413; new .....	3 3

	<i>Gen. Spec.</i>
1882. New Plants collected by Messrs. Baron and Parker.	
Baker, <i>Journ. Bot.</i> pp. 17, 45, 67, 109, 137, 189, 218, 243, 266; reprint paged differently	2 108
" Baker (with synopsis of <i>Cyperus</i> by C. B. Clarke), <i>Journ. Linn. Soc.</i> xx. pp. 87-304.	5 392
1883. New Monocotyledons collected by W. Deans Cowan.	
Ridley, <i>Journ. Linn. Soc.</i> xx. p. 329	1 10
1884. On <i>Hyalocalyx</i> , a new genus of Turneraceæ.	
Rolfe, <i>Journ. Linn. Soc.</i> xxi. p. 256, t. 10.	1 1
" New Plants collected by Baron.	
Baker, <i>Journ. Linn. Soc.</i> xxi. pp. 317, 407.	8 190
" <i>Cyperaceæ novæ</i> .	
Ridley, <i>Journ. Bot.</i> p. 13	3
" Ferns collected by Humblot.	
Baker, <i>Journ. Bot.</i> p. 139	15
1885. Complete list of all the known Orchids of Madagascar, with descriptions of new and little known species.	
Ridley, <i>Journ. Linn. Soc.</i> xxi. p. 456.	74
" New Orchids collected by Fox and Baron.	
Ridley, <i>Journ. Linn. Soc.</i> xxii. p. 116	19
1886. The present paper	7 255

29 1163

From *The Journal of the Linnean Society*, vol. xxii. No. 148.

The new genera mentioned in the above extract are *Gamopoda* (Nat. Ord. Menispermaceæ), *Trimorphopetalum* (Nat. Ord. Geraniaceæ), *Rhodosepala* and *Amphorocalyx* (Nat. Ord. Melastomaceæ), *Gomphocalyx* (Nat. Ord. Rubiaceæ), *Astephanocarpa* and *Temnolepis* (Nat. Ord. Compositæ).

*Gamopoda densiflora*, Baker. This is an erect shrub found in Antsihâ-naka and flowering in November and December.

*Trimorphopetalum dorstenioides*, Baker, is an herb found in the streams in the forest to the east of Imérina. It is abundant at "the glen" near Ankéramadlnika. Mr. Baker says it is a very distinct new generic type nearest *Impatiens*.

*Rhodosepala pauciflora*, Baker, is a herbaceous plant found in damp places in West Imerina. It flowers about the middle of the year.

*Amphorocalyx multiflorus*, Baker. This is an erect shrub from North Imerina. It flowers also about the middle of the year.

*Gomphocalyx herniarioides*, Baker, is an annual from Ankavandra in West Madagascar.

*Astephanocarpa arbutifolia*, Baker. This shrub, which is in flower about September, is from the summit of Vavavato mountain.

*Temnolepis scrophulariæfolia*, Baker, is an annual which is abundant in Antairoka (Antêhirôka?), north of the Capital.

THE AGY. The agy is a climbing plant found abundantly in Western Madagascar. The hairs which cover its pod sting most virulently.\* The plant proves to be new, so that it is not the *Mucuna pruriens*, though it is closely allied to it.† Mr. Baker has named it *Mucuna axillaris*. It appears to be in flower during the greater part of the year.

\* See ANNUAL IX. p. 118. † See ANNUAL IX. p. 119.

**THE IRON-WOOD TREE.** This is a tree which is frequently found in gardens. I sent a specimen to Kew for identification from the tree in Mr. W. Johnson's garden (south of the house), and to my surprise it proves, according to Mr. Baker, to be new. Now as the tree is undoubtedly introduced, I suspect Mr. Baker may hereafter find it to be after all *Acacia hetesophylla*, Willd., or some other known species of acacia. However, he has named it *Acacia xiphoclada*.

**THE LANDEMY.** The tall shrub or small tree with large cabbage-like leaves known as *landemy*, and found about the forests of Eastern Imerina, proves to be a new species of *Anthocleista*. Mr. Baker has named it *Anthocleista amplexicaulis*. The natives, I believe, use the bark (?) for malarial fever.

**THE ADABO.** Among the commonest trees in Western Madagascar are the *adabo*, of which there are two species, the *adabolahy* and the *adabovavy*. They are both new species of *Ficus*, the former having been named by Mr. Baker *Ficus sakalavarum*, and the latter *Ficus cocculifolia*. The *adabovavy*, whose fruit is sometimes five or six inches in diameter, is much more common than the *adabolahy*.

**THE RHODOLÆNA ALTIVOLA.** On p. 114 of the VIIIth No. of the ANNUAL the following remarks respecting this plant were made: "It was discovered about a century ago by Petit Thouars, but until recently has not been gathered since that date. In Wallace's *Island Life* it is mentioned as one of the characteristic plants of Madagascar, where it is described as a 'semi-scandent shrub with magnificent campanulate flowers the size of a camellia and of a brilliant purple colour.' It is not, however, a semi-scandent shrub, but a large tree. . . . It is pretty common in the forest of Eastern Imerina, where it is known as *Fitona*. Its fruit is edible." Now it seems that the remarks of Mr. Wallace are correct, and that the plant referred to in the above is a new species of *Rhodolæna*, which M. Baillon has recently named *Rhodolæna Bakeriana*. *R. altivola* seems to be found in the north-eastern parts of the island.

In addition to the above there have also been described recently in *The Journal of the Linnean Society*, 4 species of *Garcinia*, 4 of *Hibiscus*, 5 of *Dombeya*, 3 of *Vitis*, 9 of *Kalanchoe*, 3 of *Dicoryphe*, 2 of *Begonia*, 3 of *Dirichletia*, 3 of *Psychotria*, 6 of *Vernonia*, 3 of *Conyza*, 3 of *Psidium*, 4 of *Helichrysum*, 3 of *Aphelaxis*, 7 of *Senecio*, 5 of *Philippia*, 5 of *Onco-stemum*, 1 of *Strychnos*, 7 of *Hypoestes*, 5 of *Euphorbia*, 3 of *Antidesma*, 8 (including the two above-mentioned) of *Ficus*, 5 palms of the genus *Dypsis*, and 1 of the genus *Phloga*, 5 of *Cyperus*, and 1 *Chara* of the genus *Nikella*.

R. BARON. (ED.)

#### HABITS AND FOOD OF THE AYE-AYE.

ONE of the most remarkable of the smaller mammalia to be found in any part of the world is the Aye-aye, which inhabits Madagascar only, and of which only one species is at present known. This little creature is so different from all the other quadrumanous animals that it forms a genus and even a family of itself, while it differs in some important points of structure from the lemurs, to which Order it is most nearly allied. It is now well known to naturalists that Madagascar, from its geographical position as a continental island, presents some very anomalous forms of animal life, survivals of antique forms, which have maintained their existence in this large island, while they have been exterminated in the struggle for life with other animals on the continents.

The Aye-aye is one of the most interesting of such animals, and its organisation presents one of the striking examples that can be found of typical forms modified to serve special ends. Its food, according to Dr. Sandwith's account of its habits when newly caught, consists of wood-boring larvæ, which tunnel beneath the bark of certain hard-wooded trees. To obtain these, the creature is furnished with very powerful chisel-shaped teeth with which to cut away the bark and the wood. As, however, the larva retreats for safety to the end of its hole, the middle finger of the Aye-aye's fore-hands is considerably diminished in thickness, so as to act as a probe. Thus provided, the finger with its hook-like claw is inserted in the tunnel, and the dainty morsel drawn from its retreat; and so the animal obtains, at least in certain conditions and seasons, the bulk of its food.\*

There are also other modifications of structure, all tending to the more perfect accomplishment of the purposes fulfilled by this little creature in the order of nature: the eyes being very large so as to see by night, for it sleeps by day; the ears expanded widely, and of delicate membrane, to catch the faint sound of the caterpillar at work; and the thumbs of the hinder hands being largely developed to take firm hold while working. Dr. Sandwith also observed that the probe finger is used as a scoop when the Aye-aye drinks; being bent so as to separate it from the other fingers, it is carried so rapidly from the water to the mouth, passing sideways through the lips, that the liquid seems to pass in a continual stream. Another observer has also pointed out a remarkable point in the structure of the lower jaw of this animal, namely, that the two sides are only joined together by a strong ligament, and do not, as in most other animals, form one connected semicircle of bone. They play easily in a vertical direction, independently of each other, and when the animal is gnawing, alternately. This accounts for the prodigious power of gnawing that the Aye-aye possesses. It was seen to cut through a strip of tin-plate nailed to the door of its cage. As this power is added to the usual vertical and lateral motion of the lower jaw, its effect is not astonishing. From this strong gnawing power the Aye-aye was at first classed, by Cuvier and Buffon, among the Rodentia, but it is now determined to be an exceedingly specialised form of the lemuroid type. "Thus," says Professor Owen, "we have not only obvious, direct, and perfect adaptations of particular mechanical instruments to particular functions—of feet to grasp, of teeth to erode, of a finger to probe and extract—but we see a correlation of these several modifications with each other, and with adaptive modification of the nervous system and the sense organs: of eyes, to catch the least glimmer of light, and of ears, to detect the feeblest grating of sound; the whole determining a complex mechanism to the perfect performance of a particular kind of work."

The Malagasy living in the eastern forests and coast plains have a superstitious dread of the animal, believing that any person who kills an Aye-aye will die within a year. This fear, added to the nocturnal habits of the creature, has made it difficult to obtain specimens of the Ayeaye; but a female was sent over in 1859 to England, and lived for some time in the Regent's Park Gardens. As regards the habits of the animal, fresh information was soon obtained by the Superintendent of the Gardens, Mr. A. D. Bartlett, in some points curiously differing from Dr. Sandwith's observations. The animal slept during the day, the body curved and lying on the side, while the tail was spread out and flattened over it, so that the head and body were

\* These notes on the Aye-aye, although written some years ago, appear to me to be worth placing on permanent record, as another small contribution to the few facts yet known about this curious and anomalous animal. For further facts about the Aye-aye, see ANNUAL VI. pp. 83 and 123.

almost covered by it. Only at night did it show activity, crawling about and gnawing the timber of its cage, but showing no uneasiness at the appearance of a light, indeed trying to touch it with its long fingers. It often hung by its hind legs, and in this position would clean and comb the tail with a rapid motion of its hook like finger, in this action much resembling some of the bats (*Pteropus*).

In feeding, the left hand only was used, and from its very rapid movement it was difficult to observe it closely, but the peculiar middle finger was raised so as not to touch the food. This Aye aye showed no inclination to take any kind of insect, but fed freely on a mixture of milk, honey, and eggs, or on any thick, sweet, glutinous fluid, rejecting meal-worms, grasshoppers, larvæ of wasps, etc. From this fact Mr. Bartlett is disposed to think that the animal cannot be carnivorous; but from its possessing such large and powerful teeth, he infers that it may perhaps wound trees, and cause them to discharge their juices into the cavity made by its teeth, and that upon this fluid it possibly feeds. He thinks this supposition confirmed by the fact that the Aye aye frequently returned to the same spot on the tree which she had previously injured. Other habits in feeding seemed to strengthen this view, since the animal paid little attention to its food, and did not watch or look after it, continuing to thrust out its hand for a while after the vessel containing the food was removed. This apparently stupid act is so unlike the habits of animal intended to capture and feed on living creatures, that Mr. Bartlett believes that its usual food consists of inanimate substances. He frequently saw it eat a portion of bark and wood after taking a quantity of its fluid food.

The facts noted by two such careful and scientific observers seem to differ so much on important points that they raise the question whether there may not be more than one species of Aye aye, or whether the food of the female may not differ, at certain times at least, from that of the male. Possibly, however, the explanation is to be found in the fact that none of the insects of England which were offered to the Aye-aye were suitable to its tastes. It therefore preferred another kind of food to starvation, and ate bread, eggs, and honey with milk; for its native habits and food in the woods of Madagascar declare plainly its office as a check upon the undue prevalence of tree-destroying xylophagous larvæ. "Had the Aye-aye possessed an indiscriminate appetite for insects, it would satisfy such appetite on much easier terms than by gnawing into hard wood for a particular kind of grub." But as testified by a French observer, it has by no means an equal liking for all species of larvæ, but distinctly chooses certain kinds; and Dr. Sandwith specifies its favourite food as the destructive *montereck*. The restriction of its likings to the wood boring kinds was therefore necessary to insure the complete use of all the wonderfully adapted parts of its organisation.

According to M. Soumagne, the Aye-aye constructs true nests in trees, which resemble enormous ball-shaped birds' nests. He found them in a belt of forest inland from Tamatave. They were composed of the rolled up leaves of the Traveller's-tree (*Urania speciosa*), and were lined with small twigs and dry leaves. The opening of the nest was placed at the side, the nest being lodged in the fork of the branches of a large tree. In this nest-building habit the Aye-aye resembles the lower lemuroid animals.

"The Aye-aye is about three feet in length, including the long tail, which is one foot, eight inches and a half long; and there is a half Fox, half Lemur look about it, with a little of the Squirrel. The hind feet are at first sight like those of a Monkey, as are also the limbs; but the fingers are of all kinds of lengths, and the middle one looks as if it were atrophied or wasted" (*Cassell's Nat. History*; vol. i., p. 251).

JAMES SIBREE, JUN. (ED.)

## LITERARY NOTES.

## NEW BOOKS ON MADAGASCAR.

(1) *The Children of Madagascar*. By Herbert F. Standing. Rel. c.c., London: 1887; pp. 176, 4to, with map and many illustrations. Although written primarily for children, Mr. Standing's will be found full of interest to be read it, both young and old. The subject which Mr. Standing has taken up has not, until now, been treated of, except a very slight fashion, in any of the numerous books already published about Madagascar; and the information given is not compiled from the works of others, but has been carefully got together from original research and observation. The book the life of Hova Malagasy children is depicted from birth to marriage: the superstitions and customs connected with them, their homes and surroundings, their food and amusements, their games, their nursery tales and songs, their schools and learning—all minutely described, as well as the condition of slave children in Madagascar. The last chapter of the book is occupied by a number of interesting narratives of Malagasy life, by which further light is thrown upon their social condition, and especially as affected by Christianity. The book is illustrated by a series of engravings, from drawings executed by Malagasy artists; and 'got up' in the usual tasteful style of the Tract Society's Christmas publications; and we venture to predict it a hearty welcome in many homes during the long evenings of this winter.

Under the title of *La France à Madagascar*, par Jean Mariel; 1887, there has been recently issued a book, or rather, a brochure.

The object of this work is to relate an invasion of Imérina, a French conquest of the island, and the handing over of this terres-

trial paradise to—the Hebrews!"—*Madagascar Times*, Dec. 9, 1887.

(3) We notice in Messrs. Nisbet's list for November the following: *The Fugitives: or the Tyrant Queen of Madagascar; a Story founded on Fact*; by R. M. Ballantyne.

(4) Dr. Konrad Keller, of Switzerland, has lately published sketches of his travels in Eastern Africa and Madagascar; 200 pages of the work are devoted to Madagascar. He visited the island on both sides and also the interior, as a naturalist. (See ANNUAL X. p. 259.)

A new English-Malagasy Dictionary, in a much fuller form than that by Mr. J. S. Sewell, is now being prepared by Mr. W. Johnson. And by the kindness of the Rev. Père Causse, S. J., we learn that the following books are in preparation at the Roman Catholic Press:—*Dictionnaire malgache-français*, par le Père Antoine Abinal, S. J., missionnaire de Madagascar; and *Grammaire française pour les Malgaches*, in 12mo.

PAPERS AND PAMPHLETS ON MADAGASCAR.—In the *Fortnightly Review*, March 1st 1887 (pp. 432-441), is an article entitled "French Aggression in Madagascar," by General Digby Willoughby, of the Malagasy Army. In *The Chronicle of the London Missionary Society* for July 1887 (pp. 276-285), is a paper by the Rev. James Sibree, Jun., entitled "The L.M.S. College, Antananarivo," with two woodcuts. In the same publication for Aug. 1887 (pp. 348-355), is a paper by the Rev. A. S. Hockett, entitled "South-east Madagascar." This article contains some curious information as to the customs and superstitions of the tribes in that part of the island, the Taimôro and the Taifasy (or, as Mr. Hockett says they should be called, Ntemôro and Ntefasy), and is illustrated by an interesting fac-simile of



a page from their *Stra-be* or 'Great Writings', written in a crabbed and cursive style of Arabic, very difficult to decipher. It has long been known that the ancestors of the chiefs of these tribes were Arabs; and these writings are evidence that a knowledge of Arabic is still retained by their descendants.

*A Comparison of the Dialects of East and West Polynesian, Malay, Malagasy and Australian.* By the Rev. G. Pratt. Read before the Royal Society of New South Wales, 2nd June 1886. Sydney: pp. 24.

Since the last publication of the *ANNUAL*, a French monthly periodical in newspaper form, entitled *Madagascar: France Orientale*, has been issued at Paris, for the purpose of upholding French interests in this island. From the specimens we have seen of this publication it appears to be animated by a bitterly hostile feeling to English influence of every kind in this country, and is full of absurd and prejudiced mis-statements with regard to British officials, traders and missionaries. When will some French writers learn to write with common justice and fairness on such points? and acknowledge that Englishmen also have some rights in Madagascar, and have done some good to the Malagasy?

In the *Bulletin de la Société de Géographie de Lyon*, Fév. et Mars 1886, are articles by Msgr. Cazet, Vicaire Apostolique, entitled "L'île de Madagascar." In the Proceedings of the *Institut de France*, 25 Oct. 1886, is an article by M. A. Grandidier, entitled "Madagascar et ses Habitants;" pp. 33, 4to. In the *Revue Maritime*, Mai 1886, is an article by M. D. Maigrot, entitled "Ressources de Madagascar, au point de vue d'émigration." (Also given in the *Moniteur Officiel de Commerce*, 1886.)

In *Cosmos: Revue des Sciences et de leurs applications* (Paris) for 1887, are the following articles by the

Rev. Père Camboué, S.J.;—"Le Voanjo (*Voandzeia subterranea*, Thouars)" [a species of earth-nut]; "Tremblement de Terre à Tananarive;" and "Une Invasion de Sauterelles à Tananarive." By the same writer, in the *Bulletin de la Société Nationale d'Acclimatation de France*, is "Araneides utiles et inusables de Madagascar." In the same journal, by M. Crejun (Président de la Cour d'appel de la Martinique), "Sur la Caille de Madagascar." And in the *Bulletin de la Société de Géographie Commerciale de Bordeaux*, by the Rev. Père Cazeaux, S.J., "La Vigne à Madagascar."\*

MAP OF MADAGASCAR.—The new Map of this country by Mr. William Johnson, of the F.F.M.A., announced in our last number, has been lately issued and is a great improvement upon the two former editions. It is considerably larger (38½ in. by 20½ in.) and contains much new information, especially as to the north-east of the island, in the districts traversed by Mr. Baron, as described in the first article in this *ANNUAL*; and also as to the southern region, about the sources of the Anoláhina or St. Augustine River, the country explored by Mr. H. M. Andersen. This map is very clearly lithographed and does much credit to the F.F.M.A. Press.

WORKS IN MALAGASY.—*Tantar' ny Fiangonana eto Madagaskara, hatramy ny niandohany ka hatramy ny Taona 1887* (History of the Church here in Madagascar, from its commencement up to the Year 1887); by Henry E. Clark. F.F.M.A. Press: 16mo, pp. 510, with lith. illustrations. About a third of the contents of this volume appeared first in the monthly publication of the Friends' Mission entitled *Ny Fiangonana sy ny Sekoly*, but the rest is published for the first time. The hearty thanks of all who are interested in Madagascar are due to Mr. Clark for the great pains and care

\* For all the notices in this paragraph I am indebted to the kindness of the Rev. Père Causseque, S.J.—Ed. (J.S.)

s taken in the preparation of book. It is a mine of information every subject connected with churches and schools, the literary-Biblical translation, and medical mission work of this country, will be invaluable to all who may or write about any of these subjects. To all thoughtful Malagasy who wish to possess deep interest and a careful record of the religious history of their native land; and hope that it will be extensively read and read by them. Additional value is given to the book by graphic portraits of the Revs. D. H. Jones and D. Jones, the fathers and founders of Malagasy Christianity, and by views of the earliest churches erected for Christian worship at Antananarivo, those at Ambôdin' rano and at Ambatonakanga, also of the L.M.S. College in Antananarivo. — *Diksonary amy ny biboly, Fizarana IV., Kapa-IV.* (Bible Dictionary, Part IV., 1.—Paul), edited by Rev. James H. Jones. L.M.S. Press: 8vo, pp. 92, with woodcuts. — *Mala-Kabary from the time of Antanimitrina*. Collected by W. E. Cousins; 2nd ed., with illustrations. L.M.S. Press: 12mo, pp. 16. — *Hevi-teny amy ny Romana, Fizarana I., toko i.—viii.* (Commentary on the Epistle to the Romans. I., chs. i.—viii.), by Rev. W.

Montgomery. L.M.S. Press: 8vo, pp. viii. and 200 — *Hevi-teny amy ny Epistily nosoratany Paoly taminy Timoty sy Titosy ary Filemona* (Commentary on the Epistles to Timothy, Titus and Philemon), by Rev. J. A. Houlder. L.M.S. Press: 8vo, pp. 117. — *Ny Geometria nosoratany Euklida; Bokiny i. sy ii.* (First and Second Books of Euclid), translated by Rev. W. Montgomery; 2nd ed. L.M.S. Press: 12mo, pp. 74. — *Lesona amy ny Anatomy Generaly mbamy ny Physiology tsotsotra fombany* (Lessons in General Anatomy, together with the simple Physiology connected with it), by Dr. J. Tregelles Fox. Medical Mission: 8vo, pp. 255; 64 lith. plates; explanation, pp. lxiv. — *Tantaran' ny Fida sy ny Israely, Fizarana II.* (History of Judah and Israel, Part II.), by Henry E. Clark. F.F.M.A. Press: 8vo, pp. 250.

A new monthly periodical has been issued by the S.P.G. Press, commencing last January, entitled *Tantara sy Hevitra* (Stories and Thoughts), 8vo, pp. 16.

The following new works have been issued from the Press of the Norwegian Mission in Antananarivo: — *Tantaran' ny Firenena samihafa.* — *Hevi-teny amy ny Katekisma.* — *Anatra ho any ny Ray aman-dreny.* — *Hevi-teny amy ny Evangelia.*

SCRIPT.—By the kindness of the author, a copy of the first part of the maps illustrating the first volume of M. Grandidier's great work on Madagascar has lately reached us; and it has been a very great pleasure to examine the series of exquisite fac-similes of almost all known maps of the country which are brought together in this volume. The earliest maps, that of the Arab writer Edrisi (1153), and that taken from the ancient map of the world at Hereford Cathedral (1300), are very quaint and amusing; hardly less so are those by Behaim (1492) and Juan de la Cosa (1500). All maps, however, were made from report only, and a great stride towards a correct delineation of the true outline of the island is seen in the next map, of Pilestrina (in 1511), after Madagascar had actually been seen and its line surveyed by the Portuguese. Copies of 42 maps are given in the volume, concluding with that of Robiquet, which was published in 1865.

# DAILY TABLES OF TEMPERATURE AND

JANUARY.				FEBRUARY.				MARCH.			
Day	Max. F.	Min. F.	Rain.	Day	Max. F.	Min. F.	Rain.	Day	Max. F.	Min. F.	Rain.
1	71	69		1	71	69	.08	1	76	65	
2	72	68	2.33	2	71	69	.77	2	79	67	
3	71	69	.29	3	71	68	.01	3	80	67	.04
4	70	67	.80	4	71	68		4	81	66	.12
5	69	68	1.85	5	72	69	2.62	5	78	65	.75
6	71	67	.46	6	73	64	3.02	6	80	65	
7	70	67	.07	7	74	64	.37	7	80	68	
8	69	67	.20	8	74	65	.03	8	79	67	
9	69	67	.23	9	75	65	.22	9	79	67	
10	70	67	.15	10	76	66	.34	10	81	69	
11	72	67	.38	11	77	66	.38	11	79	67	.36
12	72	70	.11	12	73	65	1.97	12	74	63	.54
13	71	69	3.15	13	74	62	.03	13	73	64	1.22
14	69	67	2.29	14	76	65		14	73	64	.65
15	68	67		15	75	65	.07	15	73	63	.04
16	67	66		16	75	62		16	68	63	
17	70	65		17	75	65	.09	17	72	63	.53
18	70	66	.12	18	76	62		18	79	63	.51
19	71	68	.50	19	77	65		19	77	65	
20	72	69	.22	20	76	66	.25	20	78	66	.15
21	73	69	.05	21	75	65		21	77	65	2.67
22	75	70	.54	22	71	63	.83	22	72	65	.75
23	73	70	.19	23	72	63	.30	23	69	61	
24	74	70	.16	24	74	64	.36	24	65	57	.51
25	73	70	.05	25	75	65		25	67	58	.01
26	71	70	.13	26	71	65	1.62	26	74	61	.30
27	71	69	.03	27	73	64	.92	27	73	63	
28	72	69	.98	28	76	64		28	75	63	
29	71	68	.75					29	80	66	
30	70	68	.22					30	75	65	.12
31	70	68	1.31					31	74	63	
Total Rain (*13.04) 17.56				(*9.08) 14.28				(*8.22) 9.87			
APRIL.				MAY.				JUNE.			
Day	Max. F.	Min. F.	Rain.	Day	Max. F.	Min. F.	Rain.	Day	Max. F.	Min. F.	Rain.
1	73	60	.01	1	67	54		1	65	50	
2	69	59	.02	2	67	56		2	65	48	
3	70	58		3	69	54		3	60	42	
4	69	54		4	71	58		4	61	43	
5	71	57		5	73	59		5	63	45	
6	75	57		6	71	60		6	62	52	
7	73	62	.07	7	70	57		7	61	47	
8	72	57		8	72	58		8	62	44	
9	73	61		9	69	58		9	61	41	
10	75	61	.01	10	68	57		10	62	46	
11	72	63		11	64	53		11	60	46	
12	71	61		12	65	51		12	58	49	
13	71	61		13	63	55		13	59	48	
14	71	59		14	64	53		14	58	46	
15	72	61		15	65	53		15	56	45	
16	74	59		16	65	53		16	59	38	
17	74	59		17	64	53		17	62	42	
18	70	60		18	69	53		18	59	42	
19	63	58		19	69	53		19	59	44	
20	63	53	.02	20	71	54		20	61	46	
21	66	53	.02	21	72	53		21	62	47	
22	68	53		22	65	55		22	64	49	
23	68	57		23	59	52	.43	23	62	49	
24	66	56		24	61	50	.49	24	62	50	
25	68	53		25	65	49	1.20	25	62	49	
26	67	53		26	65	52		26	61	46	
27	68	54		27	65	52		27	62	46	
28	70	56		28	64	54		28	57	50	
29	68	54	.28	29	64	52		29	60	47	
30	67	54		30	61	48		30	58	45	
				31	64	45					
Total Rain (*1.26) .43				(*.96) 2.12				(*.23) .10+			

\* Average for 7 years.

# RAINFALL FOR THE YEAR 1887 (SEE NEXT PAGE).

JULY.				AUGUST.				SEPTEMBER.			
Max. F.	Min. F.	Rain.	Day	Max. F.	Min. F.	Rain.	Day	Max. F.	Min. F.	Rain.	
	47		1	61	45		1	64	53		
	48		2	60	42		2	67	52		
	48		3	63	44		3	64	54		
	49		4	66	47		4	61	48		
	49		5	63	48		5	62	50		
	44		6	62	50		6	61	48		
	49		7	60	48	.01	7	60	48		
	47		8	62	45		8	64	47		
	47		9	61	49	.01	9	66	50		
	49		10	59	43		10	57	49	.01	
	47		11	58	46		11	60	49		
	44		12	57	44		12	61	48		
	48		13	59	46		13	65	47		
	45		14	59	46		14	69	50		
	50	.40	15	62	42		15	72	51		
	55		16	62	42		16	70	51	.30	
	50		17	64	48		17	69	49	.02	
	49		18	67	50		18	65	47		
	47		19	71	47		19	65	46		
	44		20	66	49		20	66	45		
	44		21	62	49		21	71	46		
	50		22	58	47		22	70	52		
	50		23	54	44		23	66	52	.02	
	49		24	58	46		24	70	52		
	50		25	60	46		25	68	52		
	50		26	60	46		26	68	48		
	49		27	61	47		27	73	53		
	49		28	64	51		28	80	55		
	47		29	61	49		29	79	57		
	47		30	68	47		30	79	60	2.08	
	47	.03	31	70	52	.50					
Rain (*.22)			(*.18)			(*.90)			2.43		
.43			.52								
OCTOBER.			NOVEMBER.				DECEMBER.				
Max. F.	Min. F.	Rain.	Day	Max. F.	Min. F.	Rain.	Day	Max. F.	Min. F.	Rain.	
	59	.10	1	81	57		1	76	58	.02	
	55	.14	2	78	58	.03	2	76	62		
	55		3	78	58		3	73	58		
	54		4	77	56		4	76	54		
	50	.02	5	80	55		5	76	54		
	51	.01	6	85	59		6	77	55		
	49	.88	7	83	59	.10	7	74	57		
	49		8	78	59	.05	8	77	54		
	52	.10	9	69	58	.10	9	82	59		
	54	.08	10	69	57		10	79	60		
	53		11	72	56		11	75	58		
	52		12	73	54		12	75	52		
	53		13	75	52		13	76	56		
	57		14	76	54		14	77	53		
	58	.05	15	77	57		15	79	56		
	61	.06	16	82	57		16	77	59		
	57		17	76	56		17	79	61	1.35	
	57		18	75	55		18	76	60	.10	
	56		19	78	53		19	73	59	.54	
	56		20	78	56		20	71	58		
	60		21	78	58		21	71	56		
	59		22	81	57	.10	22	71	56		
	55	.45	23	82	60	.42	23	72	56	.02	
	55		24	78	59	.70	24	73	57		
	50		25	72	59	.80	25	70	57		
	55		26	71	58	.15	26	78	57	.52	
	57		27	74	56	.11	27	76	62	.72	
	56	.28	28	78	58	.19	28	74	62	.06	
	60		29	79	60	1.35	29	73	62	.08	
	59	.17	30	79	61	2.95	30	74	60	2.94	
	54						31	79	59	1.60	
Rain (*3.30)			(*5.54)			(*10.51)			7.95		
2.34			7.05								

\* Average for 7 years.

## DAILY TABLES OF THE TEMPERATURE AND RAINFALL FOR 1887.

**T**HE tables on the preceding pages are the records of observations made by myself at Fàravohitra, a northern suburb of Antananarivo, the Capital of Madagascar, 4,700ft. above the sea. The thermometers used are two self-registering ones from Wood, of Cheapside, London. They have been hung in the shade under the south verandah of the L. M. S. College House, on the eastern side of the hill, and thus have been fully exposed to the prevailing easterly winds.

The first column (maximum) shows the highest point reached during the day, while the second column (minimum) shows the starting, or lowest, point before sunrise. The third column shows the rain for the 24 hours ending at 8 a.m. on the morning of the same day. At the ends of months, however, I have included in the last day's record the rain which has fallen up to 10 p.m.

It will be noticed that the greatest heat registered was on the 6th of November, when we had 85° F.; and the lowest 38°, on June 16th. Thus the difference between the hottest day and coldest night was 47°. Compared with the English tables, I find from Whitaker's Almanac that in the years 1875-6, the highest temperature in England was 90°, and the lowest 16°, a difference of 74°.

In the monthly variations the differences have generally been very slight. Beginning with January, they are respectively as follows: 8, 6, 16, 12, 14, 9, 10, 14, 23, 16, 16, 12. The same for the nights are: 5, 7, 12, 8, 15, 14, 11, 10, 13, 11, 9, 10. The differences between night and day are 10, 15, 24, 22, 28, 27, 23, 29, 33, 31, 33, 30 respectively.

In addition to the daily record of rainfall, we give the total for each month, and in brackets the average for the seven years 1881-1887; it will be noticed that eight months were above, and four below, the average. Five months, January, February, May, August and September, showed the largest falls recorded for those months during the seven years.

The total for the year is 11.52 in. above the average of the seven, and it is the second highest for the same period.

The greatest falls of 24 hours were on January 12-13, 3.15 in., February 5-6, 3.02 in., March 20-21, 3.67 in. In June no one day could be called rainy, and the total (.10) is the aggregate fall of the drizzle which prevails at that period. In December, it will be noticed, there were 15 consecutive dry days, a phenomenon we have never noticed in December before; the largest previous record of consecutive dry days for that month during the seven years being 12 in 1885. The easterly winds have been more frequent than usual; and from the 19th to the 25th of December the wind from the east was unusually strong, and the thermometer exceptionally low for that time of the year, being 71° for three days in succession, and 70° on Christmas Day.

There have been five earthquake shocks, on February 7th and 8th, April 11th and 13th, and May 20th; that of the afternoon of February 7th being a sharp one.

Appended is the rainfall for the seven years:

1881 =	42.12 in.	1885 =	59.19 in.
1882 =	41.08 "	1886 =	47.28 "
1883 =	57.65 "	1887 =	65.08 "
1884 =	68.86 "		

Average for seven years = 53.46 in.

It is hoped this record, the first complete one published, we believe, for a whole year, may be useful to us in after years.

J. RICHARDSON.

No. XII.—CHRISTMAS, 1888.

(PART IV. OF VOL. III.)

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THE  
ANTANANARIVO  
ANNUAL

AND  
MADAGASCAR MAGAZINE.

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ANTANANARIVO:  
PRINTED AT THE PRESS OF THE LONDON  
MISSIONARY SOCIETY.

1888.

issue, inasmuch as it is a token of the valuable scientific work being carried on by Christian missionaries in the island of Madagascar.

"One of the editors of the *Annual*, the Rev. R. Baron, is a plished botanist, indefatigable in his efforts to explore the botanical resources of the island, and unwearied in his efforts to obtain material for his work; and his colleagues, Mr. J. G. Baker and other workers at home; and his colleagues, not himself and his fellow-editor, the Rev. J. Sibree, seem to devote their double duty of teaching the Christian religion and civilizing Madagascar, and of advancing our scientific knowledge of the island in which they are for the time being dwelling."

.....  
"The technical printing does great credit to the native press, though one German quotation has gone a little wrong, the press is otherwise exceedingly few."

"I feel sure that I may bespeak the sympathy of the readers of the *Antananarivo Annual*, and that we may look forward with confidence to much scientific as well as other fruit from the continued efforts of the editors and their confreres."

From a letter received from Dr. KARL BLIND, we quote the following:—

"Mr. Pickersgill was good enough to communicate to me two copies of the *Antananarivo Magazine*, which I found highly interesting. I had much pleasure in devoting two leading articles in the German to their valuable contents."

DR. R. ROSE, Ph.D., Librarian of the India Office, etc.,

"The *Annual* (No. viii.) is, as usual, full of interest; indeed its solidity and the amount of information it contains all the English Journals published in the East, the Bengal Asiatic Socy's. Journals excepted. Your plan for facilitating the circulation of the *Annual* (that is, the *Reprint*) is very good, and I have no doubt it will stir up an interest in Malagasy matters."

THE  
ANTANANARIVO ANNUAL  
AND  
MADAGASCAR MAGAZINE.

*A RECORD OF INFORMATION ON THE TOPOGRAPHY AND NATURAL PRODUCTIONS  
OF MADAGASCAR, AND THE CUSTOMS, TRADITIONS, LANGUAGE,  
AND RELIGIOUS BELIEFS OF ITS PEOPLE.*

---

EDITED BY THE  
REV. J. SIBREE, F.R.G.S.,

*Missionary of the L.M.S.*

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No. XII.—Christmas, 1888.

*(PART IV. (Concluding one) OF VOL. III.)*

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PRINTED AT THE L.M.S. PRESS.

1888.

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THE  
ANTANANARIVO ANNUAL  
AND  
MADAGASCAR MAGAZINE.

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A QUARTER-CENTURY OF CHANGE AND  
PROGRESS :

*ANTANANARIVO AND MADAGASCAR TWENTY-FIVE YEARS AGO.*

SOME fourteen years ago a pleasant meeting of members of the L. M. S. and F. F. M. A. missions living in Antananarivo was held at Faravohitra to listen to a paper read by the only surviving member of the first L. M. S. mission in this country, the venerable and esteemed James Cameron. At the suggestion of the present writer, Mr. Cameron had been asked to give us some recollections of the early mission in Madagascar and of his fellow missionaries. With this request he willingly complied, and for an hour and a half or more we were all charmed by the graphic and often quaint and humorous sketches which our friend gave us of Malagasy society and of mission work in those early days, then fifty years or so gone by. This paper was, by general request, afterwards printed in a pamphlet form, and still remains an interesting and almost unique record of life and work in Madagascar during the first quarter of this century.\*

The writer of the present paper cannot recall life in this country for so far back as fifty years, but since on the day I write these words (Sept. 29th, 1888) it is exactly twenty-five years ago since I landed in Madagascar, I have thought that possibly a few recollections of the Capital and the country

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\* *Recollections of Mission Life in Madagascar during the Early Days of the L. M. S. Mission.* By James Cameron. Antananarivo: 1874; pp. 28.

generally, and of the people, both natives and foreigners, who lived here a quarter of a century ago, may not be without some interest to those who have more recently arrived in the island; and may perhaps serve to recall to my contemporaries some memories of their early residence in this country, while it will also show a few of the changes which have passed over it during that space of time.

Before speaking of changes and progress in Madagascar, a few words may be said about changes which have taken place in the means by which we get to the island. For several years sailing ships coming round the Cape of Good Hope were usually made use of to bring missionaries and other intending residents to Madagascar. There was in 1863 no direct regular communication between the island and the outer world. A direct line of mail steamers calling at the eastern ports, whether those of the French 'Messageries Maritimes,' or of the 'Castle' line, is a matter of very recent introduction, within the last six or seven years in fact; although for four or five years before that, *Mojangà* and *Nòsibè* were in monthly connection with Zanzibar and South Africa by the steamers of the 'Union' company. Twenty-five years ago, however, the sugar-carrying ships of the 'Blyth and Green' line were our chief means of getting to this country, and about 90 days—sometimes it was 100 days—was the usual duration of the voyage from England to Port Louis, instead of the present three weeks to Tamatave by the 'Messageries' line, or the five weeks by the 'Castle' steamers. My first voyage to Madagascar, however, was by a steamer of the 'P. and O.' line, which company at that time, and for a very few years later, ran a monthly vessel between Mauritius and Suez, connecting at the latter place—via the old Overland Route, by rail across Egypt—with the India and China mail steamers of the same company. My first return voyage home, in 1867, was in a 'Union' company's steamer from Port Louis via the Cape.

But after these voyages, whether by sailing ship, or by steamer, were accomplished, we still had only got to Mauritius; and the voyage across to Tamatave, of only 550 miles, was sometimes a more difficult and trying adventure than all the 5500 miles and more of the Atlantic and Indian Ocean route. The well-known 'bullocker' of the period was then almost our only means of getting to and from Mauritius; and none of those who have sailed in that class of vessel will ever forget their experiences on board these delectable craft. The 'bullocker' was usually a broken-down ship which had been condemned as unseaworthy for ordinary trade, and so had been bought for a trifling sum as good enough for bringing bullocks from the

eastern ports. The commander had often not enough knowledge of seamanship to bring his vessel within 50 miles of his destination, so that frequently several days were spent in endeavouring to make the port. Accommodation, as regards berths or sleeping cabins, was usually entirely wanting. The cookery, to our English notions, was disgusting: oily and garlicky messes, bean soup, and plentiful supplies of cabbage and pumpkin, formed the staple fare, so that one ran a chance of being half-starved, unless private supplies were taken on board. When going to Madagascar, the stores of hay taken as forage for the bullocks often contained innumerable mosquitoes; while on the return voyage, the presence of from 200 to 300 poor beasts on deck and in the main hold was by no means a pleasant addition to the ship's company. The voyage to Madagascar was usually (under favourable circumstances) from four to seven days; but going back again was a very tedious affair, and from a fortnight to three weeks—occasionally a month—was occupied in beating up against light and variable winds; and often half of the poor animals died on the passage and were thrown overboard, as the days wore slowly away. In fact, the voyage from Tamatave to Port Louis often took a longer time than that from Mauritius to France. Truly we are fortunate now—days in having so much more speedy and convenient communication with the outer world than was the case when I first knew Madagascar. Of course the tedium and discomforts of the 'middle passage' during war times, and when going to other ports than Tamatave, are still not matters only of the past, as Mr. Pearse's paper in last year's ANNUAL (No. XI. pp. 325-328) shows; but there seems a possibility that before very long steamers will touch at most of the principal Malagasy ports.

The greater difficulty of intercourse with Europe *then*, as compared with what is the case *now*, of course made our mails much longer on the way and much more irregular than they have been for a long time past. Eight or ten weeks was the usual time letters took to come from or go to England; and during the stormy season of the year we have been occasionally three months together without any news from our friends at home.

Travelling *in* Madagascar has not during the last 25 years made any change in speed or in comfort comparable to the improvements and advance just mentioned in our means of getting *to* the island. The pathways along the coast and through the forest remain pretty much now as they were then, that is, about as bad and as difficult to traverse as they can well be. No better bridges span the streams, no more easy gradients ascend the hills, no more commodious houses are at the disposal of the traveller, than were to be found a quarter of a century ago.

A little—a very little—improvement has been made in the paths along the principal routes in the central province (as noticed in last year's ANNUAL, p. 383), but this has not affected for any distance the chief routes from the coast or to other parts of interior. A considerable improvement, however, has been made in palanquins, especially in those used by gentlemen. The very simple (and uncomfortable) *filanjana* of former times, which consisted merely of a piece of raw hide or hemp cloth nailed to two poles, without any support for the back, and from which one was very liable to be thrown, has been replaced by the iron-framed and leather-covered and padded contrivance of the present day, which, although still susceptible of improvement, is certainly much less fatiguing for long journeys. Great advances have also been made in the other appliances necessary for comfort in Madagascar travelling, such as folding bedsteads, tables and chairs, canteens, sliding-lid tin boxes, etc., etc. No one need do now what I did on my first journey here, viz., sleep in his *filanjana* (a most unsatisfactory arrangement), or sit on the floor of a dirty Malagasy hut and eat his meals off a mat. Health as well as comfort is greatly promoted by more recent contrivances.

Let me now try to recall the kind of place Antananarivo was twenty-five years ago. Very remarkable and extensive changes have passed over the Capital since that period, for hardly a building of any size now remains standing as it then appeared. Every prominent structure now breaking the long line of the city ridge has been built since 1863, except the Trano-vòla, or second largest palace in the royal courtyard, at the centre of the line. This alone remains unaltered. The shingled roof and wooden walls of the great palace of Manjakamiàdana are certainly still there, but its triple-storied and stone-arched verandah and its four corner towers are a later addition, as well as other royal houses and the Queen's Chapel, with its tower and spire. No Memorial Churches then stood prominent on the extreme points of the ridge, nor was the immense house of the Prime Minister then built, nor the numerous large and handsome residences of the chief officers, which are now crowded so closely together in the centre of the city. Two large double-verandahed timber houses—long since pulled down, were then, together with the royal palaces, the chief features in a distant view of Antananarivo.

The most important change in the appearance of the Capital has come about through the repeal of the ancient (and foolish) law or custom forbidding the erection of any building made of material other than wood, bamboo, or rush within the boundaries of the city proper (that part included by the old gateways). This

sensible change was made, together with others of still greater importance, soon after the accession of the late Queen Rànavàlona II. and her acceptance of Christianity. Up to the year 1868 therefore, all the buildings covering the central and highest portions of the city hill were entirely of combustible materials. The houses of the richer people were of the kind called *tràno kòlona*, that is, of massive timber framework with walls of thick planking, and mostly with high-pitched roofs covered with *hérana* rush, but occasionally with wooden shingles, and with long 'horns' or projecting poles crossing each other at the apex of each gable. Only a very few examples of this old-fashioned style of Hova house now remain in the Capital, and before many years they will have mostly become a thing of the past. Besides this ancient kind of house, there were also a few examples of a larger but lower house, built more in the Mauritius style, with verandah all round and low-pitched roofs. The poorer houses within the city were *tèri-làtsy*, of slight wooden framework, filled in with bamboo or rush and thinly plastered inside.

A very natural consequence of such buildings was the frequency of devastating fires in Antananarivo. During my first residence here (1863-1867) very many fires occurred, and they were indeed one of our chief excitements. Crowded closely together, as the houses were, all of wood or bamboo, with the roofs of rush, dry as tinder after five or six months without rain, and with a scorching sun overhead and the heat of cooking fires beneath, it was no wonder that if one house took fire, it was impossible to save its neighbours for a considerable distance round; and a loss of 50 or 60 or even 100 houses was no uncommon occurrence. How frequently, especially during the evening of hot days in October and November, just before the rains come on, have we not been startled by the jangling of the bells, the beat of the drums, and the shouts of the people; and rushing out have found the clouds lighted up by the glare, the white palaces standing out brilliantly illuminated against the black sky, and in a very short time thousands of people gathered together to watch the advance of the flames. Twice at least was a great mass of houses above Ampàmarinana swept away, including the temporary wooden church; and I remember that on one occasion, even across the 200 feet or so of the Antsàhatsirôa valley, the houses on the northern side were so scorched that all the goods were turned out into the courtyards, lest these houses should also catch fire.

The repeal of the old law or custom caused a great advance towards a more durable style of Building in Antananarivo, coincident as it was with a much more general use of sun-dried



brick. To Mr. Cameron we owe the introduction of these in the L.M.S. Hospital and other buildings at Anàlakely in 1862; the greater convenience and neatness of bricks as compared with mud was soon recognised by the people, and many good brick houses were soon afterwards built in the suburbs. After the accession of Queen Ranavalona II. in 1868, the combustible and unsubstantial houses in the city were rapidly replaced by brick buildings; and the erection of a brick and stone house for the Queen in the palace yard gave the plainest proof of the end of the old *régime*.

During the last ten or twelve years the much more general use of *burnt* bricks and roofing tiles has marked another great advance in the building art. All over and around the city are seen numbers of substantial well-built houses with verandah pillars of burnt brick, cut or moulded, sometimes with carved stone capitals and bases, or entirely of stone; while a rush roof is now never seen in a new house of any pretensions. To myself there are few pleasanter sights of the kind than the clusters of cone-shaped brick-kilns to be seen in the valley between Ankàdifòtsy and the north road out of the city, for these mean more substantial and durable buildings. In hardly any other direction have such real advances been made in civilisation in Madagascar as in the improvement in the people's dwellings during the last quarter-century; for an improved dwelling means to some extent improved manners, greater comfort and healthfulness, and, one would hope, some improvement in morals. It was said of the Emperor Augustus that he found Rome of brick and left it of marble. And so—to compare small things with great ones—it may be said that Mr. W. Pool, to whom a large number of new buildings in the Capital are due, found Antananarivo of perishable rush and wood, and left it largely of durable brick and stone.

The building of large two-storied and substantial brick houses has not been confined to the Capital itself, but has spread throughout Imérina and to distant parts of the island. In many of the larger villages, such as Lazaina, Ambàtoifòtsy, Ambòdifàhitra and other places, numbers of such structures may be seen, many of them really handsome buildings.

Church Architecture has naturally largely shared in this advance in Malagasy skill and taste. What rough sheds were almost all our churches even in the Capital twenty-five years ago! One is amused to recall the disreputable places we used to meet in for worship for months and years before the Memorial Churches and others were erected. The buildings at Ambàtonakanga and Analakely especially were low, dark and dingy apologies for places for divine service. Well do I remember how the rats

used often to run races round the top of the walls (only about 8 feet high) at Ambatonakanga during service time; while the small low open windows were darkened by a crowd of gazers at the proceedings inside. The Analakely church of that day was, if possible, a yet more miserable structure. It was a long, low and narrow shed, which had been used as a government workshop, and was given by Radàma II. for the use of the congregation. The Ambòhipòtsy and Ankàdibévava churches were a trifle better; and at Ampàribé a substantial square clay building had been opened not long before my arrival, which, with its clean whitewashed walls and coloured borders, etc., appeared to us to have quite an ecclesiastical dignity and elegance compared with the other places. The building it displaced was, I am told, a most curious patchwork, consisting originally of three or four native houses joined together, with odd additions and enlargements as the congregation increased.

Village churches, it may easily be imagined, were not much better; but it is only here and there in some distant places that one can now see specimens of this old style, and can thus justly estimate the great advance which has been made. One could not wish to see more appropriate village churches than are now to be found at Anjànahàry, Antsàmpandràno, Ambòdifáhitra and many other places.

The Roman Catholic church in Ambòdin' Andohàlo was then not much better than its Protestant neighbours; a small low wooden building, much like a native house, then stood where the present elegant cathedral, with its lantern-crowned towers, is erected. The S.P.G. mission had no church in the Capital at that time, and the Norwegian Lutheran mission had not then begun work in Madagascar.

Altogether, it is difficult for any one who has only seen Antananarivo within the last few years to imagine how different a place the Capital was in 1863. A series of negatives will best describe it: no Protestant Memorial Churches or any other structure worthy of being called a church; no Anglican or Roman Catholic cathedrals; no Chapel Royal; no Lutheran church; no stone or brick building in the palace yard; no Prime Minister's house; no Palace of Justice; no College, or Normal School, or High Schools, or Girls' School-houses; no Hospitals; no F.F.M.A. Press or other buildings; in short, no brick or stone structure, and no tiled roof, with one exception, that of the house with stone pillars in Ambodin' Andohalo.

It cannot be said, however, that the Roads and paths of Antananarivo have undergone equal improvement to that seen in the buildings of the city. With the exception of the well-paved road leading from the palace gate into Andohalo, and

the rougher piece above Ambàtovinàky, the roads are about as bad now as they were when I was first jolted over their primitive ruggednesses. But let me think: on further reflection, I fancy the ascent on the east side of the city *was* worse then, for I well remember a hole near Ankadibevava which would have swallowed up a waggon and horses with ease; and it is certainly a little better now. Twenty-five years ago a good many of the stone bridges over the rivers near the Capital were in fairly good order and passable. That at Tànjombàto had every arch perfect, and so had the one south of it, over the Andròmba; and the bridge over the Ikòpa at Anòsizàto was also practicable for traffic, as well as some others. Not one of them now remains. One thing may be seen very plainly in the Antananarivo roads, viz., how they wear away and became deepened every year from the roaring torrents that sweep down them in the nights of the rainy season. The road south of the Ambatonakanga church has in this way sunk ten or twelve feet since the opening of the church in January 1867. And this is the case in many other places.

During a quarter of a century Antananarivo has largely increased in size. In almost all directions the suburbs have advanced so as to include what were formerly separate out-lying villages. This increase may be seen very plainly on the north side of the Ambòhijànahàry hill, abutting on the plain of Imàhamàsina. In 1863 hardly a house had been erected there, but now it is half covered with buildings. But still more marked is the extension of the city northwards, on the Fàravòhitra ridge. When I first came here there was hardly a house all the way from some distance south of the College to nearly as far as the junction with the road from Analakely. And when Mr. Hartley built his house (the present L. M. S. Rest-house north of the College), he was considered a most rash and venturesome man to dare to live in such an out-of-the-world region, a place of executions, and the reputed haunt of robbers and ghosts, where no sensible person would risk himself after sundown! Even Mr. Ellis thought it an imprudent running of risk. It is amusing to recall all this as one walks along what is really the English quarter of Antananarivo, with its numerous houses, College, Normal School, Friends' Press, Girls' School, Memorial Church, etc., all closely grouped together along a third of a mile of the northern portion of the city ridge. A photograph in my possession shews Faravohitra in 1865, with Mr. Hartley's house as the solitary building on the top of the hill.

It may be here remarked that European Houses have greatly improved in comfort and convenience since 1863. Missionary

residences were for several years very rough and primitive in style. In some of them, drainage works had to be carried out during the rainy season on the bare mud floor; a glazed window instead of a wooden shutter was for long considered a rather needless luxury, showing a tendency to pamper the flesh; and on my own arrival, good Mr. Ellis, then our resident Director, and "guide, philosopher and friend" in general, gave me the alternative of a "rush lean-to" against one of the houses at Amparibe, or of taking up my residence in the roof of his house at Antsahatsiroa, a black and grimy retreat, well furnished with '*mainity molàly*' or 'ancient soot.' Either of these he considered would be a suitable provision for the juvenile architect of the of the Memorial Churches. Eventually I accepted neither of these tempting offers, but took up my quarters in a little wooden house then serving as a warehouse at the L. M. S. Printing office; and this, by the kind help of my friend Mr. Parrett, was soon transformed into what I considered most "eligible apartments for a single man." I hope we do not now go to the other extreme, but certainly we began with a Spartan simplicity. Health is doubtless much better maintained by the more modern style of house.

With improved dwellings has come improved and more health-giving Food. For several years—why, it is difficult to say—wheaten leavened bread was here only an occasional luxury, and was not at all considered an ordinary necessary of life. Butter we seldom saw, and even milk was not easy to procure regularly. There was an idea it was the proper thing to "live on the produce of the country," that is, on what it produced *then*, viz., plain boiled rice, black bean soup, skinny fowls, and rice fritters; a cup of coffee certainly, but sweetened with the brown treacly cakes of native sugar. The result to some of us—including myself—was a persistent course of boils for several months, sometimes laming one for a week or two at a time, and leaving scars which will be carried to one's dying day, all, of course, the simple result of poorness of blood arising from poorness of food. We have become wiser on this head. And the Malagasy, at least the well-to-do classes, have for some time past learned the use of bread and cakes, and milk and butter, and refined sugar. All this has promoted the culture of wheat in the country, and increased the demand for machine-made sugar from the coast plantations. Such a thing as bread for sale was unknown in Antananarivo twenty-five years ago; now, it may be seen on every little stall by the road-side.

With regard to Trade, any one who now walks or rides through the city from Andohàlo to Zomà market, and sees the large

number of European traders' stores all along the route, would hardly believe that in 1863 not a single foreign trader resided here, nor had any of the few firms at Tamatave an agency here. This often astonished me even then, and I wondered that Messrs. Procter and other foreign houses on the coast did not form a branch establishment in the Capital; but it was long before this took place. In some articles a large trade has sprung up since then. At that time the Malagasy hardly exported a single hide; they preferred to eat the skin of their bullocks (as they still do, to a small extent, even now, at the New Year's festival); and all the meat in the markets was cut up with the skin adhering to it.\* It is difficult to obtain statistics as to the quantity of hides exported every year from Ime-rina, but any one who comes up from Tamatave, and counts the large numbers he meets carried down every day, will estimate them at many tens of thousands annually.†

Together with improved houses among the Malagasy has come the demand for and use of improved Dress. Wherever Christianity and education have taken some little hold upon the people, there cleaner and better clothing soon follows. The dirty, never washed hemp or rofia *lambas* are replaced, at least on Sundays, by clean white ones of American or English sheeting, calico, or print. Flannel for children's clothes as well as for adults is in much more general use, with obvious benefit to health; and boots and shoes and stockings are more generally worn than in 1863, although I am inclined to consider this as a questionable benefit, and a source of risk to health, wherever their use is intermittent. Certainly very excellent boots and shoes are now made by native workmen, as neat and well finished as European articles, although not nearly so durable, owing to the inferior materials used here for tanning leather. Apparently no thoroughly suitable bark has yet been discovered in indigenous trees. In other articles of dress not much change has taken place. The Malagasy have always been skilful in the manual arts: in the making of finely woven cloths, in the plaiting of fine straw hats, baskets and mats, and in the fabrication of silver and gold jewellery and ornaments. During the past ten years a new employment for women has been introduced, I believe by Mrs. Wills, viz., the making of lace, both in thread and silk. A large number of young women are now well skilled in this art, and very beautiful work is produced by them. And in embroidery and ornamental needle-

\* Ox-hide, properly cooked with the fat, etc., is a very excellent dish, and is rightly considered quite a toothsome morsel.

† With regard to Madagascar trade generally, see a paper by Mr. Vice-Consul Pickersgill in ANNUAL X., p. 177 *et seq.*

work of all kinds, there is little that Malagasy women cannot accomplish.

I spoke just now of the changed aspect of Antananarivo within the last few years. This is, however, caused not only by the rebuilding of a large part of the city, but also by the introduction of new Trees and shrubs. The Cape-lilac is a tree which, introduced, I believe, by the first missionaries from the Cape of Good Hope, has become thoroughly acclimatised here. Several hundreds of these, many of them trees grown to a great size, are found all over the Capital and its neighbourhood; and in the months of September and October, when the tree is in bloom, the districts of Analakely and Amparibe and other suburbs are gay with the profusion of lilac flowers which cover the trees, and are fragrant with their strong perfume. During the last ten or twelve years also the Bougainvillea has been introduced, and during the months of August and September great masses of its rich purple leaf-like flowers may be seen covering the verandahs of many of the houses. A considerable number of an Australian Blue-gum have also been planted about the city, and many have shot up to a great height. Altogether, Antananarivo is much greener and prettier in appearance now than it was in 1863, although almost all the old *Aviavy* (*Ficus megapoda*) trees then growing in Andohalo and Ambodin' Andohalo and other parts of the city have disappeared.\* Another European flowering plant, however, promises to become a nuisance and a troublesome weed, the French-marigold, which, introduced a few years ago as a garden flower, has spread with great rapidity and is quickly taking the place of many indigenous plants. The love of gardens and flower planting has greatly spread among the Malagasy during the last few years through the number of European flowers and shrubs introduced by foreigners. A variety of Rose has become naturalised and in some places grows wild.

But not only have many foreign trees and flowers been planted here, but the use of European Fruits and vegetables also has been greatly extended during the last twenty-five years. And in addition to native products and many foreign fruits and vegetables previously introduced, quinces, grapes and plums are also now tolerably plentiful in their season; and peas, parsnips, carrots, turnips, beets, cabbages, lettuces, and celery can now be obtained, all rare or unknown luxuries to us a few years ago. Malagasy coffee is a very excellent article; and, quite lately, experiments have been made in the planting of tea. Doubtless many more products of other climates could be profitably cultivated here.

\* In 1863 a triple avenue of *Aviavy* trees surrounded the old palace at Isôanierâna; but hardly a dozen decaying old specimens of these now remain.

Our knowledge of Madagascar itself has become greatly enlarged and more exact during the last quarter of a century. In 1863, and for many years afterwards, we had the vaguest notions of every part of the interior, except of the few miles round Antananarivo, and of the line of route from here to the east coast. All else was almost a blank. The maps of the interior, before M. Grandidier's sketch-map of 1871, were works of imagination, not of observation or survey. The Capital was then the sole mission station in the interior, and Tamatave the the only one (of the Jesuit mission) on the coast. A excursion a small party of us made to Lake Itasy in 1866 was a plunge into the unknown, and, like every journey beyond about a dozen miles away from Antananarivo, had all the interest and excitement of a voyage of discovery. Now, for some time past, thanks to M. Grandidier, Mr. Cameron, Dr. Mullens, Mr. W. Johnson, Mr. Cowan and others, the physical geography and the topography of a large portion of the interior has been made tolerably clear. The blanks in the map are being gradually filled up (although there are yet large spaces still leaving scope for the explorer), and the map of Madagascar is now marked by the tracks of travellers in numerous directions. The old fiction of a vast backbone of mountains, running down the centre of the island from Cape Ambro to Cape St. Mary's, like an enormous centipede, with great branches at regular intervals on each side, has been exploded by a physical sketch-map, of which the general features are tolerably certain, although many details still require to be filled up. What M. Grandidier has done in this direction has been shown in a translation of the summary of his geographical labours here, given in last year's ANNUAL (pp. 329-342); but to missionary journeys also a great deal is due for widening our acquaintance with the regions of Antsihánaka, Androna, Béfandriana, Vákinankáratra, Ibètsiléó, Ibàra, Ikòngo, Antanàla, and several parts of the Sàkalàva country.

And this advance in our knowledge of the physical geography of Madagascar during the past twenty-five years has been accompanied by great progress in the allied sciences, so far as they relate to this country. Thanks to Mr. Crossley, M. Grandidier, Dr. Vinson, Messrs. Pollen and Van-Dam, Dr. Hildebrandt and others, the leading features of the Zoology of the island are now pretty well settled, and are not likely to be greatly modified, although probably many of the smaller animals, birds and reptiles still remain to be added to the lists. And owing chiefly to the labours of my colleague Mr. Baron, the Botany of the central portions and eastern side of Madagascar is now tolerably well known; although the western side

and the extreme north and south yet remain to be carefully examined by the botanist. More recently Mr. Baron has also thrown far more light upon the Geology of the country than had been done by any previous observer; but here the field is so wide that only a beginning can to be said to have been made. With regard to the Ethnology of the various Malagasy races, almost everything yet remains to be done by fuller investigation of the peculiarities of the different tribes.

In a review of the kind I am now trying to give, it is impossible to ignore altogether the Political changes which the quarter-century has witnessed; but as this is delicate ground, a brief outline of simple historical facts is all that will be here attempted, excluding criticism upon certain points where there might be some differences of opinion.

First of all then, the twenty-five years now passed have seen three sovereigns on the throne of Madagascar, viz., Queen Ràsohèrina (1863-1868), Queen Ranavalona II. (1868-1883), and the present ruler, Queen Ranavalona III. During the reign of Queen Rasoherina treaties were concluded with England, France and America; and subsequently Italy and Germany have also entered into friendly relations with Madagascar, all these five powers placing consuls or vice-consuls at the chief ports. The close of the reign of the late sovereign saw the outbreak of the war with France, which continued during the first two or three years of the reign of the present Queen, and ended, notwithstanding the brave and successful defence made by the Malagasy, in the obtaining of greater influence by the French, and the stationing of a French Resident and subordinate officers in the Capital, instead of a consul, as had previously been the case. Up to the year 1865, the elder brother of the present premier was at the head of the Government, but at that time, His Excellency Rainilaiàrivòny took the office, as well as that of Commander-in-Chief, and has ever since exercised predominant influence in national affairs.

During the reign of Queen Ranavalona II., in the year 1881, the laws of the kingdom were codified and revised; the punishments for various offences being made much less severe, particularly in the fewer crimes which were to be reckoned as capital, and also in the abolition of the ancient laws by which the wife and children of criminals were, in many cases, reduced to slavery. The old law by which soldiers deserting their colours were burned alive was also abolished. In all this it is impossible not to recognise the humanising influence resulting from Christian teaching. In the year 1877, on June 20th, all the Mozambique slaves in the country, whether brought from



Africa, or born in Madagascar, were formally set free by royal proclamation.

In the year 1881, a kind of Cabinet was formed, with departments of War, Interior, Foreign Office, Justice, Law, Industry and Agriculture, Revenue, and Education, each with an officer of high rank at its head and assisted by subordinate officials. Before that, in 1876, a proclamation had been issued appointing a number of old discharged soldiers (officers and men) to be local magistrates in the principal towns and villages of Imèrina. These officials were termed *Sakaizam-bôhitra* (lit. 'Friends of villages'), their duties being to keep order in their districts, to promote education, to act as registrars of births, deaths and marriages, etc., etc. These appointments, however, seem to have become largely inoperative, probably because the people generally were as yet hardly sufficiently advanced to carry out the new regulations, although these were excellent in themselves. More recently new governors have been appointed to all the principal ports and interior towns, many places being newly made military posts with commanders and small garrisons. Within the last few months government officers have been appointed to hold the chief authority in a large number of the villages of the central province.

Besides the armies raised during the Franco-Malagasy war and sent to various points on the coast, east and north-west, two war expeditions have, since 1863, been sent by the central Government to distant parts of the island: the first in 1873, under the chief command of Rainimàharavo, 16 Hon., to re-establish Hova authority over the central Sàkalàva. This was happily accomplished with little bloodshed and in a very humane and merciful spirit. The second expedition, under the command of Rainimiàdana, 15 Hon., only left the Capital in July, and is therefore now (Oct. 12) still on the way. Its object is to bring the turbulent Vèzo and other south-western tribes into obedience to the Queen, and to establish military posts in the neighbourhood of St. Augustine's Bay.

Embassies to foreign powers have been sent at various times: one to England and France towards the close of 1863; another, not long before the outbreak of the war with France, in the latter part of 1882, to France, England, America and Germany; and a third to France only, in 1886. And special commissioners have from time to time been sent to this country both by France and England, viz., in 1866, in 1881, and in 1886.

Great changes and improvements have been made during the last few years in the discipline, training and equipment of the native army. In 1879 numbers of old and infirm soldiers were discharged, and annual levies of troops with short service

were instituted. The troops have been armed with the best European weapons, and drilled by English officers, to whom, seconded by the bravery of the Malagasy soldiers, it was largely due that so successful and prolonged a resistance was made in the Franco-Malagasy war of 1883—1885.\*

A few words must now be said about advances in Madagascar during the past quarter of a century in higher matters than material civilisation or political arrangements, namely, in literature, education, morals and religion.

Malagasy Literature in 1863 might almost have been all carried in the pockets of one's coat. It must be understood that there is no ancient *indigenous* literature in Madagascar, the knowledge of writing having been introduced by English missionaries within the present century; and almost every thing that has been printed in the native language has been done since the year 1827 and by Europeans. When I arrived here the list of books in the native language comprised the entire Bible, two separate editions of the New Testament and the Psalms, a hymn-book, a translation of the *Pilgrim's Progress*, a dictionary (Eng.-Mal. and Mal.-Eng.), a grammar, half a dozen elementary school books, and a few sermons, tracts and catechisms. In 1888 any one who will take the trouble to glance through the pages of *A Malagasy Bibliography*† will see that a quarter of a century has produced a large number of books in the native language, issued chiefly from the presses of the London Missionary Society, the Friends' mission, and the Roman Catholic mission, and also, but in less number, from the presses of the S.P.G., the Norwegian Lutheran mission, the *Madagascar Times*, and the native Government. Naturally, a large proportion of these books are religious and educational in character, including various editions of portions of Holy Scripture, Bible handbooks and Bible history, lives of Christ, and of the Apostles, Biblical antiquities, a Dictionary of the Bible (910 pp.), commentaries, exegetical and homiletical, theology, Church history, homiletics, translations of *Pearson on the Creed*, *Bp. Harold Brown on the XXXIX Articles*, and Bunyan's *Holy War*, helps to preachers and teachers, sermons, tracts, catechisms, etc., etc. Something, however, has also been done in providing more general literature, viz., a pretty complete series of school manuals; histories of Greece, Rome, England and Madagascar; several elementary science handbooks, including physical geography, astronomy, botany, physics,

\* On several of the subjects briefly glanced at in the preceding paragraphs, much fuller information is given in the 'Brief Summary' at the end of the ANNUAL for the years 1877, 1878 and 1881.

† Published at the L.M.S Press, Antananarivo: 1885, pp. 92.

chemistry, music, and geometry; dictionaries and grammars of English, French and Malagasy, etc.; while the medical missionaries have prepared a number of books on materia medica, surgery, anatomy, the cure of diseases, etc. From the Press of the *Madagascar Times* have issued translations of the first portions of several important works treating of politics and government; and at the Government Press 'red-books' giving political documents are occasionally published. The traditionary folk-lore of the Malagasy has also been studied, and collections have been made of the proverbs, speeches, songs, customs, legends and folk-tales of the people. Except dictionaries and grammars, the great majority of books printed at the Roman Catholic Press are of a religious and devotional character; and the same remark may be also made of the publications of the S.P.G. and Lutheran societies, except that these give more prominence to Biblical study. It will be seen therefore that a native literature has been gradually growing up during the last few years, and it is being added to every year, in fact every month.

Six monthly magazines (one, *Teny Soa*, commenced in 1866), a quarterly magazine, two weekly newspapers, a Government Gazette at irregular intervals, and a small children's paper about every three or four months, comprise the periodical literature in the Malagasy language.

After going carefully through the lists of works published at the various presses, I find that a rough estimate gives the following statistics of books issued, excluding small pamphlets and slighter publications:—

<i>Society</i>	<i>No. of Books</i>	<i>Aggregate no. of Pages</i>
London Missionary Society	200	19,000
Friends' For. Miss. Asscn.	100	12,000
do. for Medical Mission	9	1,370
Soc. for Propag. of Gospel	17	2,750*
Norweg. Lutheran Miss. Soc.	18	2,800*
Roman Catholic Mission	45	9,500†
<i>Total</i>	389	47,420‡

But books would be of no value were there no readers, and accordingly, Education and the maintenance of Schools takes a very prominent place in the work of all the missionary societies who are represented in Madagascar. Schools were commenced by the first L.M.S. missionaries on the eastern

\* A few of the books issued by these two societies have been printed at the F.F.M.A. and L.M.S. presses.

† There are probably several other smaller R.C. books which have escaped my notice.

‡ The yearly issues of the L.M.S. Press from 1870 to 1880 averaged 150,000 copies of various publications; those of the F.F.M.A. Press, 67,000 copies annually.

coast in 1818, and at the Capital in 1820; and before they were obliged to finally leave the country in 1836, schools had been at work for several years in a number of the principal places in Imerina, and about twelve thousand children had been taught to read and write, etc. During the greater part of the reign of Queen Ranavalona I. education was almost at a standstill, but on the resumption of mission work in 1862, schools were again set on foot; and from that time to the present educational work has had great attention, and considerable sums have been spent on school buildings and appliances and on the training of teachers by all the societies at work in the country.

It is unnecessary to go minutely here into the details of the educational system carried out by the L.M.S. and F.F.M.A. missions, as this has been described pretty fully by Mr. J. C. Thorne in a paper in the *ANNUAL* for 1885, pp. 27-40. But it may just be here said that the great majority of the Christian congregations of Madagascar, whatever may be the society with which they are connected, have a day school, usually meeting in the church itself, where elementary instruction is given. These schools are of all degrees of efficiency, varying largely with the intelligence of the congregations and their nearness to or distance from European supervision; and almost all of them are taught by teachers who have themselves received some training from missionaries. The advance made during a quarter of a century will be clearly seen by the following figures, which, however, in some cases, from the great difficulty of gathering accurate statistics, can only be considered as approximate:—

<i>Mission</i>	1863		1888	
	<i>Schools</i>	<i>Scholars</i>	<i>Schools</i>	<i>Scholars</i>
London Missionary Soc.	7	360	950	87,000
Friends' For. Miss. Assoc.	not commenced		130	15,000
Society for Propag. of Gosp.		do.	100	4,500
Norweg. Luth. Miss. Soc.		do.	320	36,000
Roman Catholic Mission	?	?	300*?	30,000*?
<i>Total</i>			1,800	172,500

For higher education the following institutions have been established since 1863: *London Missionary Society*, Antananarivo: Normal school with Infant school for practising†; Girls' Central school; Palace school; College for training native evangelists and secular students; *L.M.S.*, Fianàrantsoà: Normal school, Boys; Girls' Upper school. *Friends' Mission*: Boys'

\* I have no access to any statistics of this mission; the above figures are only estimated from the government returns of 1882, in which the number of R.C. schools in *Imerina* is given as 191, and the scholars as 14,400. Possibly, from the large number of R.C. missionaries now at work, this is too low an estimate.

† This school was begun in 1862, but its proper work as a training school for teachers can hardly be said to have commenced until two or three years afterwards.

High school; Girls' Upper school. *Soc. for Propag. of Gospel*: Boys' High school; Boys' school; Girls' Upper school; College for training native ministers. *Norweg. Lutheran Mission*, Antananarivo: Boys' High school; Girls' Boarding school; *N.M.S.*, Vakinankaratra: College for training native ministers; Training school for teachers\*. *Roman Cath. Mission*, Antananarivo: large Upper schools for boys and girls; and the same at Fianarantsoa and Tamatave. In addition to these it may be remarked that wherever European missionaries are stationed there schools of a superior kind are always found, and in many cases training classes for teachers are also carried on; every congregation in the Capital has also a good school.

The native Government does nothing for education in the way of monetary help to schools or in the training of teachers. The first of these is left entirely to the different societies at work, and to the people of the villages where schools are established; and the second is done entirely by missionaries. But school teachers are freed from government service by express regulation, and so also are students at the colleges and training institutions. And the Sovereign and the Prime Minister have also shown great personal interest in education and have done much to encourage it. A 'department' of education is connected with the Government, but as it has no funds at its disposal it has little power initiate any work or improvement; its functions therefore are chiefly confined to the granting of certificates to qualified teachers, freeing them from government service, and to some other details of registration, etc.

Students have also been trained for several years past in medicine and surgery by European doctors both of the Medical Mission and of the Norwegian society. A Medical Missionary Board was formed in the year 1886, and this conducts examinations and grants diplomas†. A considerable number of Malagasy are now fairly well qualified doctors, while many female students have been instructed in midwifery and allied subjects.

It will be evident therefore that the past quarter of a century has seen a great advance in educational work in Madagascar; and although very, very much yet remains to be done before the people even of the central provinces can be considered as properly educated, yet a good foundation has been already laid for future advance, and many thousands of people possess at least the rudiments of knowledge, and can make intelligent use

\* These various institutions, those at least which are at work in Antananarivo and belonging to Protestant societies, have about 1500 students and scholars. We have no returns of the Roman Catholic schools, or of others away from the Capital.

† 'M.M.M.A.,' i.e. 'Member of the Medical Missionary Academy.'

of the books which have been and are constantly being provided for their enlightenment.

Lastly, we must briefly review the Religious and Moral changes in Madagascar since the year 1863.

Protestant Christianity, it is well known, was first taught in this island on the east coast, in the year 1818, and was brought to the Capital two years later, by missionaries of the L.M.S. For fifteen years these first Christian teachers in the central province laboured zealously to lay the foundation of a native Malagasy church. They reduced the language to a written form; they prepared dictionaries and grammars of Malagasy; they translated and printed the entire Sacred Scriptures, and wrote a small number of religious works and elementary school books. As already noticed, they founded numerous schools in and around Antananarivo, and two Christian churches were formed in the Capital, with 200 church members.\* Then came the period of persecution and repression of Christianity during the reign of Queen Ranaivalona I., throughout which repeated efforts were made to root out the hated religion of the foreigner, and to terrify the people from acknowledging their faith in Christ. It is well known that these efforts were in vain, and that numbers of Malagasy preferred to give up their property, their honours, their liberty, and even their lives, rather than deny the truths which they had received.†

The time of persecution and distress passed away in August 1861; and, with slight interruptions, the history of Christianity has been one of general advance ever since that time. In October 1863 Queen Rasoheryna had only within the past five months come to the throne. She never accepted the Gospel for herself, yet she freely allowed religious liberty to her subjects; and her reign (1863-1863) was a time of steady and real progress. Soon after the coming to the throne of her successor, the late Queen Ranaivalona II., the new sovereign publicly announced her adherence to Christianity. She was baptized, together with the Prime Minister; the national idols were burnt, an act followed almost immediately by the destruc-

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\* Besides the intellectual and spiritual benefits brought by the L.M.S. missionaries, much instruction was also given to the Malagasy by the lay members of the mission in several of the arts of civilised life: viz., in improved methods of carpentry, building, iron-work, tanning, and weaving; many useful products of the country were also discovered by them, such as lime, sulphur, potash, soda, etc.

† Some slight attempts have been made within the last few years to discredit all this, and to insinuate that no persecution for Christianity ever took place in Madagascar! but that all who suffered during Queen Ranaivalona I.'s reign, suffered for political offences. I cannot here go fully into the question (I hope at some time to take it up), but will only say that no facts in the history of the Church are better attested or are more capable of the clearest proof than is the persecution of Christianity in Madagascar. Many of those who suffered in various ways are still living among us, and they can confirm all that the first missionaries wrote upon the subject.

tion of the idols and charms of the people generally throughout the central provinces, and wherever Hova influence was powerful; and a large mass of heathen people immediately crowded the native churches already built, and soon erected new places of worship in almost every village of importance. This large accession of numbers necessitated a considerable increase of the missionary staff, and accordingly, in the year 1870 and for several years following, the L.M.S. mission and that of the F.F.M.A. (the latter commenced in 1867) were greatly strengthened, so that the staff of the former was eventually brought up to 30 missionaries, and that of the latter to 10. Up to the year 1870, Antananarivo was the only station with resident missionaries, although their work had been for some time gradually extending to a considerable distance from the city and all around it. But in that year Ambohimanga and Fanarantsoa (the Betsileo capital) were occupied, then four more stations in Imerina and Imàmo, then Vônizôngo and the Antsihànaka province, then Mojangà (on the north-west coast), and other stations in Betsileo; while, later still, Tamatave, and lastly, the Taimoro country, on the south-east coast, have also been occupied by L.M.S. missionaries. This makes a total of 14 mission stations, if Antananarivo and Fianarantsoa are only reckoned as one each, but of 24 stations, if the different districts of which they are the centres are counted separately. English missionaries of this society have thus spread widely over a large extent of Madagascar.

Missionaries of the F.F.M.A. have also gone out into the large district under their care (but also in close connection with the L.M.S.); and two centres of work away west from the Capital have been formed and occupied by them.

But the presence of from 30 to 40 European missionaries would be utterly inadequate to overtake the requirements of from 1100 to 1200 congregations were these not supplemented<sup>6</sup> by native agency. About 3700 Malagasy preachers, some of very slender attainments, but many with a fair knowledge of what they preach, instruct the congregations every Sunday; and for more than nineteen years past the L.M.S. College has been training an average number of from 40 to 50 young Malagasy as native evangelists and missionaries. More than 100 of these are now stationed all over the country wherever Hova influence extends, and are in most cases doing excellent work in evangelising and teaching the people. In order to guide and strengthen and promote mutual help among the large number of still weak congregations, a Church Congress or Congregational Union was formed in the year 1868 for the Imerina churches, and later on, in 1875, also for those among the Betsileo; and great

benefit has resulted from the association of all the churches in these respective provinces. In 1875 the Imerina Union began to send native missionaries to heathen portions of the country, and although its first efforts were unsuccessful, eventually its work has become more encouraging, and for some time past ten native evangelists have been at work at different stations. The Betsileo Union has also native missionaries among the Tanàla and Bàra tribes. In both of these Unions the necessary funds are chiefly obtained from the subscriptions, as yet only very small in amount, given by the native churches. Within the last five years many Sunday Schools have been commenced among the larger congregations; and a Sunday School Union for mutual help and united action has been established. During the same period also a Young Men's Preachers' Union has been formed for carrying the gospel into the villages, and this society supports two native missionaries in distant places. An Orphanage for destitute children has also been at work for several years past. In all these departments of benevolent effort we see self-help developing, and evidence that a spirit of earnestness and liberality and zeal is gradually growing up among the Christian people; evidence more satisfactory than series of figures shewing merely numerical increase in congregations, church members, or adherents.\*

The Church of England mission in Madagascar at first included missionaries of the Church Missionary Society as well as those of the Society for the Propagation of the Gospel. Both of these societies commenced work here in 1864, but in 1874 the former of the two relinquished its position in the island; and since then the work has been entirely carried on by missionaries partly supported by the S.P.G. and partly by a more private society. For some years the Anglican mission was confined to the east coast, but in 1872 a station was commenced in the Capital; and in 1874 Antananarivo was made the seat of a bishopric. Subsequently a missionary College was established at Ambàtoharàna, about 12 miles north of the Capital; and later on, a station with resident missionary was formed at Ramainàdro, about two days' journey away to the west; and Anglican congregations have been gathered in many villages in Imerina. European missionaries are stationed at Tamatave, Andòvorànto and Māhanòro on the east coast, and a considerable number of congregations are superintended by them among the Bètsimisàraka people. The S.P.G. staff for some time past

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\* I hope it will be excused that I here give more details of the work of the L.M.S. and F.P.M.A. than of that of the other societies. It is simply because I am better acquainted with the former. I heartily rejoice in all good work done by every Christian body labouring here.



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has consisted of ten missionaries, including the Bishop and three lady teachers.

The Norwegian Lutheran Mission in Madagascar was begun in 1867. Its work is chiefly in Vakinankaratra and Betsileo, with a representative church in the Capital. Here also is its Press, Hospital, Boarding schools and, until lately a College; the last named, however, has recently been removed to Vakinankaratra, where also is a Training Institution for school teachers. Besides occupying in force the above mentioned districts, the Norwegian mission has also stations in the southern Sakalava country; and within the past year has entered upon a new field, in the Tanosy district on the south-east coast. In all, this mission, has about 20 central stations, with about 25 missionaries including lady teachers.

The Roman Catholic mission was in the field a little before the reoccupation of the Capital by the L.M.S. missionaries in 1863, for Réunion being so much nearer to Madagascar than England is, it was easy to send over a small detachment of mission priests immediately the country was re-opened to Christian teaching. A large staff of priests of the order of Jesuits (since 1886 headed by a bishop), a number of lay brothers, who teach in the schools, and of sisters-of-mercy, also engaged in education, has for many years been at work in Madagascar. Their numbers have been considerably increased since the conclusion of the Franco-Malagasy war, and they occupy central positions at Antananarivo, at Fianarantsoa, and at Tamatave, with mission stations and churches in a large number of villages in all the three provinces of which those towns are the capitals. Large and efficient boarding and day schools are taught in the three chief centres of work; but, so far, there seems to be no staff of native Roman Catholic clergy.

From the above particulars, although they may appear at first sight very dry and catalogue-like, it may be easily gathered that a large amount of work has already been done in Madagascar by the different societies, as well as by Christian natives, during the past twenty-five years. Since 1870 about 70 Protestant missionaries have usually been labouring here, and probably there have been as many Roman Catholic missionaries, except during the years 1883-1885.

And now it may be asked, What are the *results* of all this work during a quarter of century?

Here we can only give the barest outline of the leading facts: but let it be remembered, in the first place, that the idolatry of the central provinces has been utterly swept away, together with a large mass of the superstitious beliefs which were connected with the idols, such as the killing of children born

on unlucky days, the trust in charms and divination, etc. The *langèna* ordeal, so deadly in its consequences to thousands of the Malagasy, has been completely abolished. Many tens of thousands of the people have been educated, their minds enlightened and largely freed from the foolish notions of their ancestors, and imbued with a knowledge of the leading facts and truths of the Christian religion. Polygamy has been put away; the facility with which divorce used to be effected has been largely diminished; and the open and shameless licentiousness of heathen times, especially on certain occasions, has been put down by a more enlightened public opinion. The amelioration of the laws, and the abolition of cruel and barbarous punishments has already been noted, as well as the humane and merciful spirit shown even in time of war. Slavery has become less bitter, and a large number of African slaves have been liberated. Besides all this, from two to three hundred thousand people in nearly 2000 congregations listen every week to the Word of God and to teaching which must tend to elevate and purify their minds and lives. Thousands of people are in church fellowship; and while large numbers of these are still ignorant and only nominally Christian, there are also numbers who, it cannot be doubted, are sincere believers in the truths they profess, and are trying to live in obedience to the precepts of the Gospel. A religious literature is gradually growing up; and an educated native ministry is being formed, which is increasing in numbers every year. The native churches are beginning to see their duty to evangelise those of their countrymen who are still heathen, and are doing something to supply them with religious teaching. In all this there is surely cause for thankfulness on the part of every true philanthropist as well as of every sincere Christian.

There is, it cannot be denied, a reverse to the picture; and there are still evils and deficiencies which all who wish well to Madagascar must deplore. As already said, a large amount of religious profession is no doubt merely nominal, and is due to the fact that Christianity has been patronised by the Sovereign and the higher classes. And this has never been concealed by those who know best all the circumstances. A great deal of ignorance and superstition still remains; the marriage tie is still far too loose, divorce and separation far too common; and a sad leaven of impurity of conduct yet defiles the churches of every denomination, to say nothing of "those who are without." There is still a very low ideal of the purity of justice; but this and other abuses are largely attributable to the fact that no salaries are paid to public servants of all ranks, and that *fànompàana* (unpaid government service, as well as that due to feudal superiors) is the principle on which government

has here from time immemorial been carried on. This, no less than slavery, still hinders social improvement; but it would be difficult to make any but gradual changes in either. Many good laws have been promulgated, but sufficient motive power to make them effective is as yet largely wanting. During the last few years drinking habits have certainly greatly increased, and the laws forbidding the manufacture or sale of spirits in Imerina have been gradually relaxed, so that they are becoming a dead letter. But here again, much blame is due to the greed of foreigners, who evade the native laws and flood the coasts with bad rum, and bring wine and spirits into the interior to tempt the people; and also to European powers, who have not effectually helped the Malagasy Government to keep these evils out of the country. Crimes of violence have also increased in number and boldness during the last decade; and within the last two or three years large bands of armed robbers have almost depopulated some districts, carrying scores of the inhabitants away into slavery, and bringing untold misery on the people.

These are some of the shadows in the picture of the "quarter-century of progress" which I have here tried to paint, and they are sufficiently saddening and discouraging. But let it be again remembered how little, after all, is the amount of Christian effort which has yet been brought to bear upon the heathenism of this great island, when compared with its needs; and how short also is the time, compared with that of the life of a nation, during which these influences have been in operation. For it is really only about eighteen years ago since systematic work was begun in order to guide and enlighten the great mass of heathen people who, at the burning of the idols, put themselves under instruction. When we look at the state of our own and other European countries after *centuries* of Christian influence, we need not be astonished that Madagascar is not yet all we wish it to be; and when we remember the condition of some churches even in the Apostolic age, we need not wonder that much impurity and evil still exists in many Malagasy churches.

If we keep these facts in view, and if we remember also how much has already been accomplished within this quarter of a century, all who are interested in the enlightenment and true progress of Madagascar need not be disheartened, but may rather thankfully exclaim, "What hath God wrought!" Let us be encouraged by the success of the past to labour with still greater zeal in the future, until this country takes its place among the enlightened nations of the world, and rejoices in the fulness of the blessings which civilisation and Christianity bring to every people.

JAMES SIBREE, JUN. (ED.)

## THE TRIAL BY CAIMAN:

A STORY OF THE 'TANGEM-BOAY' OR CROCODILE ORDEAL  
OF THE TAIMORO.\*

CERTAIN philosophers of the last century discovered that savage life was preferable to civilisation, and regretted in pathetic tones the unhappy condition of those nations which have made any progress in the arts of life. These admirers of what is very absurdly called "a state of nature" could never have visited Madagascar, or even have wandered thither in imagination, wafted on the magic chariot of the pen. Had they done so, I doubt if they would have deplored the demoralising effects of civilisation upon a primitive people. The Madagascarites—whether Malagasy, or Antankàra, or Bètsimisàraka, or of the numerous other tribes—are in truth primitive. They allow a plurality of wives, they believe in charms, they delight in war, they venerate certain birds and animals, they kill children born in an unlucky hour, they bury a large quantity of ready money with every rich man, and and never dig it up, suffering severe inconvenience in a short currency thereby; while, worst of all, their criminal justice consists in giving the *tangena*. The *tangena* (*Tanghinia venenifera*) is a subtle vegetable poison, which is administered to persons accused of sorcery. Any individual can accuse another of this crime and demand the application of the *tangena*, or the *lèla-by*, i.e. 'tongue and iron' ordeal. The accuser goes before a judge and states his case; the judge sends him to the *ampanangena*, who is half priest half executioner. Having learned the motives of the accusation, this person first experiments on young fowls. He gives them *tangena* in water, and says, "If thou art come forth from a bull, die!" If it dies, the presumption against the accused is strong. He then tries again: "If thou comest from the shell of an egg, die; if thou hast for father a bull, live!" If the fowl dies, the evidence is startling.

This trial takes place seven times, and if there be three results in favour of the prosecution, the *ampanangena* gives the heads and claws of the fowls to the informer, who goes before the judge and gets an order for a *sahàly* or trial. A *tràno fàdy*, or 'tabooed house,' is built, in which the judge, witnesses, accused, *ampanangena*, and all who are to be present at the trial, pass the night. Next morning, the accused, stripped of all clothing, is placed on the green sward and surrounded by the crowd. The judge makes a speech, and the *ampanangena* gives the *tangena* mixed with water on a *ràvindlat* leaf, after which the culprit swallows a draught of rice water. Frightful convulsions soon ensue, and the wretched being dies in ninety cases out of a hundred, confessing all he is asked to confess. The *lèla-by* consists in passing a hot iron over the victim's tongue three times, when, if a blister rises, the spears of the bystanders immediately

\* This romantic story appeared many years ago in an English magazine; and as it is veritably 'founded on fact,' it is here reproduced for the readers of the ANNUAL.—EDS.

† The Traveller's tree (*Ravenala madagascariensis*, Sonn.), the leaves of which are long and broad and almost exactly like those of the banana and plantain.—EDS.

terminate his life. This barbarous and savage legislation is observably effectual in checking the increase of population. Scarcely a day passes but some head of a family perishes. But the most abominable feature in the affair is, that the goods of the victim are divided into three parts—one for the chief, one for his officers, and the third for the informer. Radâma, the celebrated king of Madagascar, when shown the absurdity and wickedness of the practice, replied, "Find me another tax which will as easily fill my treasury."\*

But these primitive habits are not all. The people of this great island have others, which will be explained by my narrative.

In the village of Mâtitâna, on the river of the same name, lived Rakâra, a young girl of sixteen, of gentle mien and modest countenance, belonging to the aristocratic caste of the Zanakandriana. The village is situated on an island at some distance from the banks of the river, and containing 300 houses, is not of small importance in the land, being, moreover, fortified. Rakara was a beauty and rich, her father having left her much property at his death, and she owned numerous slaves. She had many suitors as a matter of course; but she was more fastidious than the generality of her people, and none seemed to touch her heart until young René, a native born, but whose father was a Frenchman, appeared in the village on a trading expedition. Rakara saw and loved. The semi-white was handsome, tall, and striking in appearance, and, it was said, generous and frank in character. But René scarcely saw Rakara, or, if he did, he distinguished her not from the multitude of dark women who flitted around him. He was present at the dances of the village; he admired the elegant forms of the girls who demonstrated their talent before him; but his eye seemed to favour no one in particular. Rakara was stricken with despair, and went to an old woman, learned in the science of futurity, for counsel. The old woman took her fee, performed incantations without number, and promised to turn the heart of the cold youth towards her; but more dollars went than results were produced, and Rakara almost regretted having used any other charms than those she had been endowed with by nature.

Still, love is a passion which, in this primitive state of society, is not easily to be conquered by reflection, or even by its apparent futility. In civilisation the feeling would have been concealed by the girl, unless called forth by the addresses of the man. Rakara attempted not to convey to René the least suspicion of her emotions, the more that she had heard him declaim against the idea of settling in a wild, out-of-the-world place like Matitana. But she put faith in the protective genius of the Malagasy, and early one morning she crossed over to the mainland in a canoe to pray for his intercession. The vegetable productions of Madagascar are varied and rich, and the wooded shore was composed of a tangled mass of trees and parasites, whose appearance was charming, each vying with the other in the beauty of leaf and flower. Amidst a dense thicket of this verdure Rakara concealed herself, neither listening to the songs of the choristers of the woods, nor dreading the snakes, or centipedes, or wild boars and cats, which people the virgin forests of this

\* For further particulars of these Taimôro ordeals, common to other Malagasy tribes as well, see *ANNUAL II.*, pp. 98-101; *Reprint*, pp. 219-227.—EDS.

island. She knew a shady spot, yet open to the light, where the *ravin-tsàra*\* sent forth its perfume from nut and leaf, and where also grew the plants she made use of for her incantation.

The place selected was a hollow where the grass grew to a great height, rank and strong, and here Rakara halted, after collecting a quantity of the herbs she needed. These were piled in a heap in an open space, which she cleared with her hands, and several odorous leaves and nuts of the *ravin-tsàra* being added, the young girl set fire to the whole, and sitting down, began to chant a monotonous ballad beginning,

"He! he! he! izala he!" the moon looks down;

"The moon in the blue sky, he! he!"

such as is widely sung throughout the district.

The dry grass and twigs crackled, flamed and smoked, while the young girl gazed eagerly on, as if expecting an instant manifestation of the will of the divinity. But as nothing greeted her eager eyes she still hoped that the guardian spirit of her race would act invisibly, and was about to rise and return, when a step was heard, and Ratsimy, one of her suitors, stood before her.

"Rakara is burning incense to the Angatsa" (evil spirit), said the young man coldly.

"And why not to Zànahàry?" asked the girl, trembling, and mentioning the good angel of her faith.

"You do not answer?" continued Ratsimy.

"I own no right in you to ask me," said Rakara, moving as if to go.

"Rakara knows well that Ratsimy loves her; that he has told her so two moons ago; and that, like Rahàfo—who dared the enemy of man in the Mount Tangòry for love of Fihàly—Ratsimy would brave any danger for Rakara."

"I have spoken once," replied the young girl coldly; "the daughter of the great chief of the mountains will not be even the first wife of Ratsimy, much less one of his wives."

"Rakara," cried the lover impetuously, "do not anger me. Recollect I have caught you exercising sorcery."

"Give me up to the *ampanangena* then!" said the girl indignantly; "your threats have less value than your protestations;" and Rakara ran lightly through the wood, leaving Ratsimy in great anger, meditating vengeance.

Rakara was not without alarm. She knew Ratsimy to be a young man of violent passions, sometimes uncontrollable; but she still doubted his descending to denounce her because she could not return his love. She paddled quickly across the river to the village, and met René smoking his pipe before breakfast on the strand. René complimented the girl, without looking at her, on her address and activity in paddling.

"A Malagasy girl is not always flying from a lover," replied Rakara, as she was about to pass.

"What mean you? 'Flying from a lover.' That's not like your age and race," said René curiously.

"Rakara is different from her race, and runs to avoid the anger of Ratsimy, who is heated with passion because I said I loved him not."

\* A tree which grows to a large size (*Ravensara madagascariensis*) and produces a valuable spice. Its leaves are used for scenting oil and other substances.—EDS.

"And who, pretty one, is the favoured brave?" asked René, gazing on her with admiration.

"Rakara never accepted love from any one," she cried and darted away. René filled his pipe and puffed away for some time in silence, thinking the damsel a strange girl, and then he went to breakfast and forgot the subject.

That evening there was solemn council held in the camp of Matitana. It chanced to be the night of full moon, but the pale and cold luminary had not yet risen over the lofty trees, though its light already pervaded the sky. A marshy space near the river's bank was the spot chosen for the deliberation, which never took place but on the night of the full moon. The chief of the village sat on a raised pile of boughs; around were the men and women of the place in a vast circle. René leant against a tree behind Laihóva, the old head-man of Matitana. The river ran dark beside them, its swift current glancing by in the gloom; and about two hundred yards distant was a low bank covered with reeds, often infested by crocodiles, as are most of the rivers in Madagascar. Presently the moon rose in the sky, the water sparkled in the light, the trees showed clearly their dark outlines, and the whole tribe could be distinguished. It was eight o'clock, and the business of the night commenced.

Rakara stood before the chief, accused by Ratsimy of sorcery. As soon as the moon had risen, Laihova stood up, and, like most of his countrymen, fond of speaking, addressed the assembly at length on the atrocious crime of sorcery. He pointed out its fatal consequences, visible in the ailments which it produced, and the many deaths yearly in the district, all to be attributed to the wickedness of male and female sorcerers. He was sorry that a girl so excellent should be there on so terrible a charge, but he must see justice done.

Ratsimy then declared his belief that Rakara was a witch, and related what he had seen that morning, leaving out his declaration of love and his threat. He expressed profound grief at having to accuse one so lovely, and hoped she might clear herself.

A judge then arose and implored Rakara to tell the truth and confess her crime—an act that would have been giving herself to certain death on the instant, and which the girl declined performing, it may be presumed, for that very reason.

"I am innocent!" she cried aloud. "Ratsimy is a false coward; the caimans will decide between us!"

"As you will; so be it," said the judge.

"What are they about to do?" whispered René to a Malagasy near him.

"Rakara will swim out to yonder island. If guilty, the caimans will devour her; if innocent, she will come back in safety."

"But the river swarms with these savage monsters. The girl is innocent: I swear it, I know it!"

"She must stand the trial," said the superstitious native. "If innocent, there is no danger."

"This is mere savage stupidity; I will speak!"

"And die," said his friend solemnly. "The people will spear you if you dare to interfere."

René ground his teeth with rage, and moved nearer the young girl.

"Rakara," said Laihova, "confess ; once more I conjure you !"

"The caïmans shall decide," replied the girl, who, conscious of her innocence of anything beyond trying a harmless charm for a harmless end, under the advice of a 'wise woman,' felt safe ; for she believed in the efficacy of the trial.

"*Ombidy*," cried the chief, addressing the half-priest half-executioner, "she is yours."

The *ombiasy* took her by the hand and led her towards the river, on the bank of which he addressed an invocation to the savage crocodiles, calling on them to rise and devour her if guilty ; then left her to a few young attached female friends, who braved contagion and stood by her to the last. Rakara thanked them gently.

"Rafâra," said she, turning to one, "give me that ribbon to tie my hair ; it may prevent my swimming freely."

The girl, much moved, gave the silken tie, and aided her to apply it. Then Rakara took off her *kilâmby* and *sikitrâtra*—garments equivalent to European petticoats—and plunged into the river.

René shuddered and, with the whole tribe, rushed to the banks of the stream. The bright moon illuminated the picture in every detail. There was the bold swimmer, her head and arms only visible, while her long hair floated behind, as driven back by the motion : every splash was seen clearly. She swam with astonishing rapidity. René felt sick ; he knew the fatal character of the river, and had himself shot crocodiles on the little island. Most of the people gazed on coldly, but some anxiously. Ratsimy stood silent and sullen on one side. Every time there was the least stir in the water, all expected to hear a shriek and a struggle. The reptiles to which Rakara was exposed could have killed her at one bite. From twelve to sixteen feet long, their voracity is frightful, and many is the victim which falls under their jaws, especially in these trials which at Matitana replaced the *langena*.

A low murmur of applause arose as Rakara stood upright on the island, and then sat down to gain breath. René thought the trial was now over ; but the worst was to come. The unfortunate girl was in a very nest of crocodiles, but, nothing terrified, she rose after five minutes, and plunged headlong into the stream and disappeared. René held his breath for half a minute, at the expiration of which she reappeared not, and then felt inexpressible delight as she rose and landed. Again, after taking breath, she plunged a second and third time, and, rare instance of good-fortune, reappeared as often. After some time she entered the river once more, and swam towards home.

"The worst is now to come," thought René ; "the savage animals must be alarmed by all that noise. God help her !" he added, as he caught sight of a commotion in the water near the island, and next moment saw a huge caïman with his scales flashing in the moonlight. The young man closed his eyes, and when he opened them again, Rakara was within fifty yards of the shore. With a wild shout of joy René fired the two barrels of his fowling-piece, as if by way of triumph, but in reality in the desperate hope of checking the progress of any pursuing alligator. The people shouted ; they felt the girl was innocent.



Ratsimy stood transfixed with terror; still, another death-like silence ensued. The girl was weary and swam slowly, but presently was within ten yards of the shore. Her female friends were ready with a large cloak given by René for the purpose, a white African robe which he wore at night; and as this fell around her, so did the arms of the young man.

"People of Matitana, I claim this heroic and innocent girl as my wife," he cried, wild with enthusiasm and joy. "I knew her innocent and beautiful; I now know her for something more. As for that base wretch, I claim for him the law of retaliation!"

"As for claiming the girl as a wife," said the chief, "that rests with her; but Ratsimy will pay her a thousand dollars, and thus, in poverty and misery, will repent his folly."

"Worse than folly!" cried René; "the girl refused his love, and this is his revenge!"

"Is this true, Rakara?" asked Laihova.

Rakara, far more troubled at the sudden explosion of the young man's feelings than at her trial, was silent a moment, and then made an open confession, not without blushes—many, yet unseen—before the whole tribe. Now that René had spoken, her love was legitimate and just; and, according to her native customs, she felt a pride in her public avowals.

"Ratsimy," said Laihova, when she had concluded, "you are a false and lying slave. Rakara has the choice: you will swim to Caïman Island as did she, or you will pay her all the value of your flocks and cattle, and then be bound as a slave to her for life. Choose, girl."

"I forgive him all!" cried Rakara warmly, "for am I not happy? I have gained the husband that I love; that was worth the race."

René's admiration knew no bounds; and then on the spot he denounced the wickedness and folly of this mode of trial, showed how easily malevolence could get up false accusations, and offered, if the tribe would abolish all such practices, to settle among them; otherwise, he would retire to Mauritius, where he was educated, and visit them no more. His eloquence was persuasive; the people were in a moment of enthusiasm: the custom was abolished, the *ombiasy* dismissed, and that very evening the simple marriage ceremony of Matitana was celebrated.

René settled in the place, was very prosperous, and lives there, for ought I know to the contrary, up to this very day. He made Rakara a happy wife, and found a deep satisfaction in having been the instrument of abolishing "trial by caïman."\*

PERCY B. ST. JOHN.



\* The above scene is no fiction; it was witnessed by Leguével de Lacombe.

## M. GRANDIDIER'S SCIENTIFIC RESEARCHES IN MADAGASCAR.

(Concluded from ANNUAL NO. XI.)

### PART II.—METEOROLOGICAL AND MAGNETIC.

THROUGHOUT the whole time I spent in Madagascar I kept a register where, three times a day, as regularly as interruptions from illness and the difficulties of travelling would allow, observations by the barometer, the thermometer, and the wind-guage were recorded, together with notes on the weather, and the maximum and minimum temperatures. Besides these I ascertained at Tolla the temperature of the soil. Unfortunately, the registers of the two first years, which I had deposited at Saint-Denis in Réunion, were burned in an accidental fire, and I have therefore at hand only the observations taken between May 28th, 1868 and July 15th, 1870. These observations, which I have reduced to curves, are not yet published; I have only given a first sketch of them in the *Revue scientifique* of 1872.

For investigation of the magnetism, I have ascertained in nineteen different places the declination, the inclination, and the exact intensity of the magnetic needle. These observations have not yet been published.

### PART III.—GEOLOGY AND NATURAL PRODUCTIONS.

I.—GEOLOGY. The geological formation of Madagascar was absolutely unknown before my explorations.\* I was the first to reveal the existence in this island of a vast extent of the Secondary formation, which is shown very plainly by the various species of *Nerinea*, *Ammonites*, *Astarte*, *Nucule*, *Rhynchonella*, etc., which I there collected. These strata do not cover less than a third of the island towards the west and the south. Except an extremely narrow belt of Lower Tertiary formation which, extending along the western coast, rests in turn upon Oolitic beds, the most recent formations found in the island seem to be these same Secondary strata. The Oolitic rocks just mentioned are characterised by Nummulitic fossils, such as *Neritina Schmidliana*, *Teretillum* (near to *T. obtusum*), *Ostrea pelecypodium*, *O. Grandidieri*, etc., and Foraminifera of the same geological period, such as *Alveolina orbiloides*, *Triloculina*, etc., which I have collected there. In the north-west, as well as to the south of the central mass of Ankàratra, I have proved the existence of Palæozoic rocks; I have brought from Pàsindàva Bay a fragment of *Orthoceras*, which leaves no doubt as to the age of the beds, where are also found the only coal deposits at present known in Madagascar.†

\* See, however, ANNUAL IX., p. 77, footnote.—EDs.

† Since the above was written M. Grandidier has seen reason to alter his opinion as to this supposed fossil. Mr. Baron, writing under date Sept. 1st, 1887, says, M. Grandidier "in his reply tells me he agrees with me, and the *Orthoceras*, of which I doubted the existence, 'proves to be a simple concretion.'"—J.S.

Although I have not been able to study the geology of this island with all the minuteness I could have wished, because of the Hova laws which prohibit under the severest penalties mining research, and, consequently, any study of the soil, this first sketch of a country hitherto completely unknown in these respects may in the meantime be not without a certain interest. A summary of my geological discoveries will be found set forth both in the *Revue scientifique* (1872), and in the *Comptes rendus de l'Académie des Sciences* (Sept. 9th, 1867 and Dec. 11th, 1871).

II.—THE INHABITANTS OF MADAGASCAR. The inhabitants of Madagascar do not belong to one and the same race. Immigrants both from the Arabs, the Hindoos, the Africans, and the Malays, who have come at various epochs into this island, have here become mingled with the aboriginal inhabitants, who, by their appearance, their customs, and their language, seem to belong to a group of the negroid peoples of Polynesia and Melanesia; so that it is a point of great interest to endeavour to get a complete view of their migrations, by carefully studying the characteristics of the different Malagasy tribes.

I have taken measurements of twenty-three individuals of different tribes, and I have photographed in front and in profile a certain number of types, which I shall have reproduced by engraving. I also procured three crania, not an easy thing to do in a country where the worship of the dead is a real religion; but two of these were consumed in the same fire which destroyed my registers of meteorological observations of 1865 and 1866. In short, I have studied carefully and in all their details the customs, the dialects, the religion, and the oral traditions of the different peoples among whom I have lived.

I have given a summary of my observations upon the inhabitants of Madagascar in the *Bulletin de la Société de Géographie* (April 1872), in the *Revue scientifique* (1872), and in the *Archives des Missions scientifiques et littéraires* (1872).

III.—NATURAL PRODUCTIONS AND THE GEOGRAPHICAL DISTRIBUTION OF ANIMALS. Although the obtaining of an accurate knowledge of the physical aspects and climate of a country should occupy the first place in a traveller's thoughts, he ought also, as already said, to study the living creatures which inhabit it, and the vegetable productions which grow there. Such has constantly been my object in all my travels, especially in Madagascar. This island, indeed, which remains in the Indian Ocean as a modest witness to the vast regions which formerly occupied this part of the southern hemisphere, and which have disappeared in one of those violent cataclysms to which our planet has so often been subjected, is, notwithstanding its narrow limits, and especially its proximity to the great African continent, a world in itself, which has a fauna and flora abundant in peculiar species and genera, and an appearance all its own. And if my two first journeys in the east and in the west have shown that all was yet to be done as regards topography, I have also become convinced that, notwithstanding the beautiful and rich collections gathered together by various explorers, there yet remains much of novelty to discover as regards natural history, and numerous interesting facts still to elucidate. From that time therefore I formed the

project of publishing a complete Physical, Natural, and Political History of the island,\* finding that it would be a matter of very great interest to study in all its aspects a country so curious, and whose limited extent would enable me to treat of it fully with tolerable facility. It was for his end that I followed the advice of my learned friend and fellow-worker M. Alphonse Milne-Edwards; and notwithstanding the daily attention which I gave to the study of geography, I have not been uninterested in studying the animals and the plants which occupy the country. I have made every effort to form collections which would allow of a complete study of the very unusual types which Madagascar presents, especially in the two classes of Mammalia and Birds. I have not been content to follow the usual custom of travellers, that is, of preparing only the dried skins, which are of no value except to shew the external characteristics, but I have taken care to obtain the skeletons, and also perfect examples of the animals preserved in spirits, in order that a complete anatomical examination might be made of them. I have also striven to obtain for each species specimens of all ages and of both sexes, from the foetus taken from the mother, and young animals in the time of dentition, up to old adults, records which are all wanting in European museums. I have also tried to gather together numerous series of animals belonging to the principal genera, so as to determine the limits of variability which mark each species, both when found in the same conditions and also under different conditions; for the science of Zoology is not confined to-day, as it was at the commencement of the century, to a dry nomenclature intended chiefly to aid the memory, and to facilitate the artificial classification of living creatures, but it has a more philosophical aim: it endeavours not only to seize the relations which exist between the animals which are its study, but it strives also to note with care the differences brought about by different conditions upon animals of the same species. Reptiles, fishes, molluscs, insects—all have been equally the object of my attention; and I have collected a very large quantity of new species, some of them of great scientific interest. I have also obtained numerous fossil bones and shells. I have formed an herbarium, especially in the western part of the island, which had

\* The following is a detailed description of the different divisions of M. Grandidier's magnificent work now in course of publication:—

1. *Géographie physique et mathématique*, 1 vol. avec cartes et dessins, par M. A. Grandidier.
2. *Météorologie et Magnétisme*, 1 vol., par M. A. Grandidier.
3. *Ethnographie, Anthropologie et Linguistique*, 2 vol., avec planches, par M. A. Grandidier.
4. *Histoire politique, coloniale et commerciale*, 1 vol., par M. A. Grandidier.
5. *Histoire naturelle des Mammifères*, 6 vol. (3 de texte et 3 de planches), par MM. Alph. Milne-Edwards et A. Grandidier.
6. *Histoire naturelle des Oiseaux*, 4 vol. (1 de texte et 3 de planches), par MM. Alph. Milne-Edwards et A. Grandidier.
7. *Histoire naturelle des Poissons*, 1 vol. avec planches, par M. le Dr. Sauvage.
8. *Histoire naturelle des Reptiles*, 1 vol., avec planches, par M. A. Grandidier.
9. *Histoire naturelle des Crustacés*, par M. Alph. Milne-Edwards; *Histoire naturelle des Insectes*, par MM. Künckel d'Herculais, Lucas, Mabilie, Oustalet, de Saussure; et *Histoire naturelle des Annélides*, par M. L. Vaillant, 6 vol., avec planches.
10. *Histoire naturelle des Mollusques terrestres et fluviatiles*, 2 vol. avec planches, par MM. Fischer et Crosse.
11. *Histoire naturelle des Plantes*, 4 vol. avec planches, par M. H. Baillon.
12. *Géologie et Paléontologie*, 1 vol., avec planches, par MM. Alph. Milne-Edwards, A. Grandidier et P. Fischer.

never before been explored, an herbarium which comprises some very interesting plants, many of which belong to remarkable and new genera, and are described by M. Baillon in the *Bulletin mensuel de la Société linéenne de Paris*.

The collections which I have gathered together with this scientific object are considerable, and I have presented them to the Natural History Museum of Paris. I could not expect to be able, unaided by others, to carry out completely all the investigations necessary; my own acquaintance with Zoology is too limited to allow of my doing so, besides which, a lifetime would be too short for the purpose. But I have applied to various scientific men known in France for their knowledge of special branches of science; and for the Mammalia and Birds I have been fortunate in obtaining the learned co-operation of M. Alphonse Milne-Edwards.

These collections have enabled me to explain clearly the general characteristics of the Malagasy fauna, a fauna which has a character quite peculiar to itself, and to which I take the liberty of calling the attention of the Academy. For if I venture to speak at some length upon its principal characteristics, and upon the very curious geographical distribution of the Indrisinæ and the Birds, descriptions of which are already published, it is not simply on account of their different divisions—monographs of which are in preparation, and which I believe will in the mean-time be useful to point out many details in which my collections differ from those of other travellers—it is more because these zoological investigations really throw light upon the geography of past times; and because the highly specialised character presented by the Malagasy fauna shows clearly that we cannot consider Madagascar simply as a dependence of a neighbouring continent, as merely an African island, but as a country which has had its own individual history, its independent existence. My discoveries go to prove that at the end of the Secondary epoch and at the commencement of the Tertiary period it formed a vast continent extending far towards the east.\*

Among the Mammalia, the order of the Lemuridæ is represented in Madagascar by nine genera, some of which are numerous in species, while in the rest of the Old World (Asia, Oceania and Africa) it can only count five genera, all told, which are also poor in species. The only plantigrade Feline known is originally from Madagascar; and the Galidia, the Hypogeomys, the Oryzorictes, and the Geogale are peculiar genera. There is no other country in existence, even of much greater extent, where there are found so many species differing from those which exist in neighbouring regions. But we shall return to this subject later on.

Of the species of Birds which are found in Madagascar, 130 are peculiar to the island; and certain genera peculiar to this little corner of the world, such as the Couas, number as many as 12 different species.

In the class of Reptiles, besides the exclusively Malagasy genera which I have discovered, and which, zoologically considered, are very remarkable, it is curious to notice that the genus Chameleon, that very aberrant

\* See, however, Mr. Alfred R. Wallace's different views and arguments in this point in *ANNUAL X.* p. 141, footnote.—ED.

pe in the series of Lizards, is represented in Madagascar by a considerable number of species (24) differing very much among themselves;\* while in all other parts of the Old World one can only reckon, up to the present time, 28 species; and even this figure must certainly be considered too high, since, from their being less known than those in Madagascar, the same species has in several cases been described under two names.

In the class of Batrachia (Frogs and Toads), I have discovered two remarkable new genera, which give a special character to the Malagasy fauna.

In the class of Fishes, I must notice an interesting zoological fact: this is, the small number of these creatures which are found in the rivers and lakes of Madagascar. Up to the present time only ten species are known, while in France, which is less in extent, there are nearly 50. I will remark here that the family of the Siluridæ, so abundant in Africa, is only represented in this island by a single *Ancharius*; and, a most important fact in considering the geographical distribution of fishes, that here there is not a single example of the Cyprinidæ or of the Characiniidæ, families so numerous in Eastern Africa.

An examination of the 1600 Coleoptera† which are now known in Madagascar also supplies interesting facts bearing on the general character of the Malagasy fauna. The greater part of them are peculiar to the island; others approach Indian types, or are even identical with them; others have an African appearance; and one of them recalls European forms. The Cicindelidæ (Tiger-beetles) are represented by a score of species, and by two peculiar genera, one of which comprises not less than 11 species. Some of the Carabidæ (Carnivorous beetles) recall our European kinds; others belong to genera which are strictly Malagasy and are very numerous. I will not speak of the Aquatic insects, whose geographical distribution is too wide to permit of their having much interest in this respect; but the Coleoptera which are most worthy of study are the Scarabæi. The Cetoniidæ (Rosechafers) are richly represented in Madagascar, where 70 species have been described, many of whom do not resemble any of their allies in the other regions of the globe, either in their form or their colouring, and they consist of small and well-defined groups. Some genera of Melolonthidæ (Cockchafers) attract attention by their special characteristics, and the fine white or red scales which cover their wing-cases; one of them resembles an Indian species. The great family of the Buprestidæ (Metallic-beetles) also possesses great interest; for by the side of the cosmopolitan genus *Halcophora*, one finds also some Psiloptera, of which the extremely numerous species in this island (68 of the 189 which are known) are remarkable for their rounded forms, resembling that of the Cassidæ, and which have a very specialised appearance. I have not, in this short sketch of the special character of Madagascar entomology, spoken of the Curculionidæ, the Cerambycidæ and other Coleoptera, the larvæ of which live in seeds or in trees, and which, spreading over a very wide area, show more their affinities with neighbouring faunas than distinct characteristics; at the same time certain genera of these are peculiar to

\* See also ANNUAL V. p. 99.—ED. † Beetles, or 'Sheath-winged' insects.

the island. I have also found a true Cantharid of a new species; up to that time only a *Meloë* was known there as a representative of the Blister-beetles. One can see from this brief sketch what a very special character is presented by the Madagascar Coleoptera.

The Lepidopteral fauna\* is equally remarkable in this respect, that, as in the case of the other division of Zoology which we are discussing, it throws special light upon that of the African continent, to which it is so near; not only that there are evident connections between the two, but also from the presence of numerous species which are peculiar to the island, or which have their origin in common with those of India, of Malaya, or of Arabia,† and so give to it a special character. The genus *Euplœa*, which is unknown in the continent, but is, on the contrary, common in Malaya, here includes three species. Some Pieridæ have also a Malayan cast. Certain Lyceidæ recall those of Arabia; and when the genera are African, the species are most frequently peculiar, or those which belong exclusively to the intertropical zone seem to have been accidentally introduced there. As for the others, the greater part of the African species which are developed in Madagascar have undergone an alteration more or less great, and which has often appeared sufficient to cause them to be considered as specifically distinct; but it is probable that eventually they will only be regarded as simple varieties, or as local races. The Nocturnal Lepidoptera are not yet so well known as the Diurnal ones; some, however, attract attention, especially the Bombycidæ, of which the cocoon supplies the natives with a kind of silk, or, rather, of floss-silk, with which they make woven fabrics. Also the Saturniidæ, a beautiful species of which I discovered on the west coast, and also that curious type which naturalists term '*Actias cometa*', and which is remarkable for its two long twisting tails.

Thanks to my collections and those of other naturalists, the progress of our knowledge of this special branch of natural history has been very rapid during the past few years. Thus, in 1833, Boisduval was acquainted with 75 Diurnals and 67 Nocturnals, making a total of 142 Lepidoptera found in Madagascar; 32 years later, in 1865, Guénée, in his Catalogue, brought the number of Diurnals to 88 and that of Nocturnals to 90, a total of 178 species; to-day our list comprises about 230 Diurnal and more than 400 Nocturnal Lepidoptera.

I will add that in Madagascar the Coleoptera and the Lepidoptera, as also the Vertebrata, are very often of limited range of habitat; certain species are only found in the sandy plains of the west, while others are restricted to the mountainous and moist region of the east.

The order of Hymenoptera‡ presents a singular mixture of Indian and of African species, almost equal in numbers; and these are supplemented by a small number of indigenous species which present points of connection with those of the neighbouring continent, and even with those of Europe.

Among the Malagasy Orthoptera§ one finds certain Mediterranean species, which have come along the East African coast.

The Myriapod fauna, on the contrary, assumes in Madagascar an African character; for, if the majority of the insects of this order which

\* Butterflies and Moths, or 'Scale-winged' insects. † I have found in the south of Madagascar the *Idmais dyamene*, which is also found in the Arabian peninsula. ‡ Bees and Wasps, or 'Membraneous-winged' insects. § Locusts, crickets, etc., or 'Straight-winged' insects.

re found here belong to extensive *genera* spread over the whole circuit of the globe within the limits of the tropics, and if the *species* do not bear any local stamp, it is those which belong to genera whose geographical distribution is less extended which give any indications to this effect.

The fresh-water Molluscs have an African appearance, but the terrestrial Molluscs have, on the contrary, quite special characteristics of their own, with the exception of a single species belonging to the African genus *Achatina*.

A very curious fact which has struck me since the commencement of my explorations in Madagascar, and to which I have drawn the attention of naturalists, is, the sharply defined geographical distribution of many species of living creatures, not only between two regions so different in character as the east and the west, one of which is mountainous and humid, and the other flat and dry, but often also between two regions having the same physical features, the same climate, and the same vegetation. Thanks to the extensive series of Lemurids which I have collected, it has become clear that the species of this genus which are described in catalogues to the number of 20 are, for the most part, only local races or varieties, and ought to be reduced to six. These animals, taken separately, certainly seem to be distinctly characterised by differences strongly marked and easily recognisable at first sight; but it is no longer the same when one takes into one's hands a complete series of animals of various ages and from different localities. It is then seen how impossible it is to know where begins and where ends any one of those species which, for want of sufficient information, naturalists have up to the present time distinctly separated. Very frequently these varieties form local races which have clearly defined habitats, but of which the characteristics, already variable enough even at the centre of their geographical area, are still more modified at its outskirts. Besides which, it is not only the colour of the fur which varies among these animals; those anatomical distinctions which are usually regarded as fixed are subject to important changes; and even certain skulls might possibly have been considered as belonging to new species, if I had not myself killed the animal and preserved its skin. The Makis are not the only kinds in which this great variability is to be noticed; it is the same with the Indrisinæ, the Lepilemurs, and the Hapalemurs. It is also the same with certain Birds and with certain Insects.

It is therefore clear how interesting are these very special features presented by the animals of Madagascar, and that it was serviceable, from a scientific point of view, to bring together all that had been previously done, and to complete the study of them by anatomical investigation.

Here are the various Memoirs and Works which I have published upon the animal life of Madagascar.

13.—*Liste des Mammifères de Madagascar (Revue et Magasin de Zoologie, 1867)*. This Notice contains an enumeration of 39 species or varieties of Mammifers which I observed in Madagascar from 1865 to 1867.

14.—*Le Propithèque de Verreaux (Album de l'île de Réunion, 1866, with two plates)*. This Notice contains a description of a new species of



Propithecus which I killed at Cape St. Mary, in the south of Madagascar, together with detailed information as to its habits and its habitat, which extends from Fort Dauphin to the River Tsijobonina.

15.—*Description d'un Propithecus nouveau* (*Comptes rendus de l'Académie des Sciences*, t. lxxii. p. 231; 1871). This Notice contains a description of a new species or, rather, a new race, of Propithecus, to which I have given the name of *Propithecus Edwardsii*. This race inhabits that part of the eastern region which is situated south of the River Masôra. More to the north is found the type species, the *Propithecus diadema*.

16.—*Description d'une nouvelle espèce de Propithecus* (*Rev. et Mag. de Zool.*, août 1872. In co-operation with M. Alphonse Milne-Edwards). In this Notice we have shown the characteristics of a species or, rather, a new race, of Propithecus (*P. sericeus*), which comes from the N.E. coast of Madagascar, and which is confined to the north, as *P. Edwardsii* is to the south. These curious facts of geographical distribution, unexplicable up to the present time, I have made a matter of very special study.

17.—*Description d'une nouvelle espèce de Chirogale* (*Annales des Sciences naturelles*, t. xii. 1869). I discovered on the west coast of Madagascar a Chirogale, still unknown in collections. This little Lemurid is remarkable for the size of its tail, which is enveloped by a solid layer of fat, stored up there during the rainy season to serve as its nourishment during the lethargic sleep in which it passes the dry season. On returning to Paris I found among the drawings of Commerson a figure of this curious animal, to which Geoffroy Saint-Hilaire has given the name of *Chirogalus medius*.

18.—*Note sur un nouveau genre de Chiroptère* (*Bull. de la Société Philomathique*, 21 juin 1878. In co-operation with M. Alph. Milne-Edwards). This new Bat is remarkable for the air-cushions which are situated under the thumb of the anterior limbs and under the foot of the hinder limbs. The *Thyroptera* of Brazil alone possesses similar characteristics, but the Malagasy species differs from it in the arrangement of the teeth, the ears, and the tail. We have described it under the name of *Myropoda*.

19.—*Observations anatomiques sur quelques Mammifères de Madagascar* (*Ann. des Sci. nat.*, avec planches, 5e sér., t. vii., 1867. In co-operation with M. Alph. Milne-Edwards). Neither lion, nor tiger, nor panther, is found in Madagascar; the *Cryptoprocta ferox*, the only Malagasy carnivore which is of any size, is plantigrade like the bears. It had been placed among the Viverridæ by naturalists who, up to the time of my researches, had only had in their hands the skull of a young specimen, of which the teeth were still incomplete. The adult skeletons which I obtained have enabled us to settle the exact place which this animal should occupy; in fact, it belongs to none of the known zoological families. On the whole, it approaches nearer to that of the Cats (*Felis*) than any other; in a word, it is a plantigrade Feline.

20.—*Description de Mammifères nouveaux* (*Rev. et Mag. de Zool.*, sept. 1869). In this Notice I have described a new Bat and a large herbivorous Rodent, the *Hypogeomys antimena*. I must call attention to this Rodent, which I discovered in Ménabé (W. Coast), as it was believed up till then that the Madagascar fauna did not comprise any representative of this order, which is yet so widely spread over the surface of the globe. This animal is found on the banks of the Tsijobonina.

21.—*Description d'un Mammifère nouveau découvert à Madagascar en novembre 1869 (Rev. et Mag. de Zool., fév. 1870).* I have described in this Notice a new genus of Insectivore (*Oryzorictes hova*), which, although belonging to the family of the Centetidæ, is very far removed from the Tenrecs, the Ericulus and the Echinops by the nature of its fur and the shape of its teeth; and approaches, on the other hand, the Solenodon of Cuba, and the Potamogale of the Gaboon. This animal, which supplies a link which was wanting between the prickly Centetidæ of Madagascar and those of softer covering found in America and Africa, possesses very special interest.

22.—*Description d'un nouveau Mammifère insectivore (Ann. des Sci. natur., 5e sér., Zoologie, t. xv. 1872.* In co-operation with M. Alph. Milne-Edwards). This Notice contains a description of a genus of Insectivore, the *Geogale aurita*, which, like the *Oryzorictes hova*, of which we have just spoken, is one of the Centetidæ with ordinary hair, and which possesses, like that one, great interest from a double point of view: both from that of the geographical distribution of the Mammalia on the surface of the globe; and also as showing the modifications which zoological forms can undergo, while not losing the characteristics which connect them with the same fundamental type.

23.—*Mammifères découverts à Madagascar en 1866 (Rev. et Mag. de Zool., mars 1867).* This Notice contains the diagnoses of three new Mammalia which I killed on the west coast in 1866. Among the animals is a *Potamocheerus* or Masked-hog [more accurately, Bush-hog?] peculiar to Madagascar, the discovery of which possesses great interest when the general character of the fauna of this island is considered.

24.—*Histoire naturelle des Indrisinés.* (In co-operation with M. Alph. Milne-Edwards.) 2 vols. 4to, 1874, with 122 plates and a map shewing the geographical distribution of these Lemurids.

The 'Natural History of the Indrisinæ' forms the first two volumes of the *Histoire des Mammifères de Madagascar*, a work in course of publication, which will comprise six volumes in 4to with about 405 plates, and where the Mammalia of Madagascar can be studied in all their details, not only from the zoological point of view, properly so called, and viewed geographically, but also as regards their osteology, physiology, embryology, etc. M. Alph. Milne-Edwards and I have united in the conception of this work and have divided the labour connected with it: I have occupied myself with the description of the animals, with a study of their geographical distribution, and with their osteology; M. Milne-Edwards has investigated their physiology, anatomy, embryology, etc. The two volumes which have appeared also give an idea of the plan adopted for the whole work, and the manner in which the subject will be treated. The atlas contains 122 plates, representing the various Indrisinæ and the details of their structure, and also a map on which the habitats of each of the different species and races are carefully indicated.

Of all the orders of Mammalia which are represented in Madagascar, the richest in species and in individuals is that of the Lemuridæ. This order is also the most characteristic one of its entire fauna, which is so curious in every respect; and it shows that this island is certainly a witness to a vast continent which once extended far towards the

east.\* Some new and important facts have been suggested from the studies we have been engaged in on this interesting order; but I cannot here enlarge upon the very curious and unexpected anatomical and physiological differences which distinguish the Lemuridæ from other Mammalia; and I will only say that our labours have proved that these animals do not occupy an elevated position near the Monkeys, as zoologists have supposed, but that they approximate rather to the Herbivorous animals and especially to the Pachydermata.

An inspection of a number of animal outlines drawn on twenty-four plates, where I have first shewn the relative dimensions of the different parts of the Indrisinæ and of certain Monkeys, previously considered one by one, then have compared them with each other and with those of an arboreal quadruped, the Kinkajou, shows plainly that, on the whole, the skeleton of the Indrisinæ differs much more from that of the Monkeys than from that of the Kinkajou.

One chapter is devoted to a detailed description of the different species or races of Indrisinæ, and to a study of their habits and their very remarkable geographical distribution. This we have shown on a map, and it proves the very great influence exerted by local conditions upon the distribution of species and races in a country. Each of these animals has indeed its native land, to which, as Buffon said, it seems restricted by physical necessity.

25.—*Liste des Oiseaux de Madagascar* (*Rev. et Mag. de Zool.*, 1867-1868). This Notice contains an enumeration of the Birds which I have observed in Madagascar from 1865 to 1867, about 150 species, of which 94 are peculiar to this island.

26.—*Oiseaux nouveaux découverts à Madagascar en 1866* (*Rev. et Mag. de Zool.*, mars 1867). I have in this Notice given the diagnoses of five new species of Birds, four of which belong to the genus *Coua*, a genus exclusively Malagasy, which already contains eight species. All these species of *Coua* have a very distinctly defined habitat. This is an interesting fact in zoological geography.

27.—*Description d'un nouvel Oiseau découvert à Madagascar en 1866* (*Rev. et Mag. de Zool.*, fév. 1870). This new species of Bird, *Bernieria* (*Mystacornis*) *Crossleyi*, belongs to the very curious family of the Eupetidae and possesses very special interest.

28.—*Histoire naturelle des Oiseaux*. (In co-operation with M. Alph. Milne-Edwards.) 1 vol. of text and 3 vols. of plates, 1879-1884.

The ornithological fauna of Madagascar is very remarkable. If, in short, one excepts the Birds of wide range, such as the Wading birds, the Web-footed birds, and certain of the Raptores, most of the species which inhabit this island are not found elsewhere; and there are a great many genera, 34, which are peculiar to it. The interest which it presents has induced us to figure not only all those Birds which are peculiar to the island, and those which, although common to it and other regions, are little or slightly known, but also, as far as my collections have allowed, to give their skeletons and in some cases their viscera. M. Alph. Milne-Edwards has willingly undertaken the anatomical exam-

\* See, however, Mr. Alfred R. Wallace's opinion on this point; *ANNUAL X.*, p. 141, footnote.—ED.

nations, while I have occupied myself with the bibliographical, zoological and geographical portions of the work.

The Birds described in this work, which is accompanied by 400 plates and a map shewing the geographical distribution of the Couas, number 224 species, of which 130 are peculiar to the island. The numerous series which I have collected have shown that in Madagascar, where there are two altogether different regions, one mountainous and humid, the other flat, sandy, and dry, the Birds, sprung originally from common parents, but now collected together in these different centres, show, and always in the same way, differences of form and plumage. The geographical distribution of the Couas or Malagasy Cuckoos, of which certain species are peculiar to the eastern side, others of which are only found in the west, and one of which even inhabits exclusively the central region, has engaged my attention very specially.

Without here enlarging on the minute studies to which we have devoted ourselves upon the Birds, and which has thrown light upon very interesting facts, I will say that this monograph, as well as that upon the Indrisinæ which I have already spoken of, is, both from a descriptive and anatomical point of view, as well as for the beauty and fullness of the drawings, one of the most complete which has ever been published upon the fauna of any country, without even excepting the countries of Europe.

29.—*Liste des Reptiles nouveaux découverts à Madagascar en 1866 (Rev. et Mag. de Zool., juillet 1867)*. These Reptiles, namely two Tortoises, seven Saurians and a Serpent, come from the south-west coast. Many of these do not belong to any known genera, and present a very special interest when considered in connection with the Malagasy fauna. I will mention, among others, a river Tortoise which closely approaches the American types, and especially a Lizard which, with the organisation of a Gecko, has the head and entire body covered with scales like tiles, and which connects together two such very distinct families as those of the Geckos and the Skinks.

30.—*Description de Reptiles nouveaux découverts pendant l'année 1869 sur la côte ouest de Madagascar (Rev. et Mag. de Zool., sept. 1869)*. This Notice contains the diagnoses of eleven new Reptiles, of which several belong to genera which have never yet been described as in Madagascar.

31.—*Description de quelques Reptiles et Batraciens nouveaux découverts à Madagascar en 1870 (Ann. des Sci. nat., 5e sér., Zoologie, t. xv, 1872)*. I have in this Notice described six Saurians and seven Batrachians. Among the Saurians, I will cite three new species of Chameleon which must be added to those numerous ones already known from Madagascar; this island seems to the place of the origination of these curious Saurians.

32.—*Description d'une nouvelle espèce de Chaméleon de Madagascar (Bull. de la Soc. Philom., 1880. In co-operation with M. Léon Vaillant)*. This Notice contains a description of a new Chameleon which has been sent to me from the eastern side of Madagascar, and to which we have given the name of *Chameleon furcifer*. This is the twenty-fourth Malagasy species of this very aberrant genus of Saurians.

33.—*Description de quelques espèces nouvelles de Lépidoptères (Rev. et Mag. de Zool., août 1867)*. These Lepidoptera, to the number of three, have been discovered on the south-west coast of Madagascar. From this

same region I have brought the beautiful *Papilio antenor*, whose home was unknown, although described by Drury in the last century; and also several species which have never been described from Madagascar, among others, a *Pieris*, which belongs essentially to the Arabian fauna.

34.—*Observations sur le gisement des œufs de l'Æpyornis* (*Comptes rendus de l'Acad. des Sci.*, 9 sept. 1867). The attention of the Academy has been called at different times by Isidore Geoffroy Saint-Hilaire to a gigantic Bird, whose existence has been shown by some enormous eggs coming from the south of Madagascar, eggs much larger than those of all known birds, since their capacity exceeds 8 litres, and their volume equals that of six Ostrich eggs. Some fragments of bone found besides these eggs led Isid. G. Saint-Hilaire to think that they belonged to a gigantic three-toed bird, which he has described under the name of *Æpyornis maximus*. The numerous fragments of eggs which I have collected, mingled with sub-fossil land shells, in the sand-hills which border the south coast of Madagascar, enable me to say that if this gigantic bird is not now existing, it has been living at a very recent epoch, since its remains are found in the most recent formations, whose development indeed continues up to the present day. Mr. Dawson Rowley thinks that the egg-shells collected at Cape Saint-Mary do not belong to the *Æpyornis maximus*, and that they come from a different species, to which he has given the name of *Æ. Grandidieri*.

35.—*Sur les découvertes zoologiques faites récemment à Madagascar* (*Comptes rend. de l'Acad. des Sci.*, t. lxxvii. 14 déc. 1868, et *Ann. des Sci. nat., Zoologie*, 5e sér., t. x. 1868). In this Notice, M. H. Milne-Edwards has presented to the Academy an extract from a letter in which I gave him information of the discovery, which I made on the west coast of Madagascar, of fossil bones of a new small Hippopotamus, of a Zebu, of the colossal Bird known under the name of *Æpyornis maximus*, of two large Tortoises, and of a still unknown Crocodile. Up to that period it had been believed that the fauna of Madagascar did not possess any representative of the order of Pachydermata. The discovery of a Hippopotamus peculiar to this island, which has coincided with that of the Bush-hog, has modified the opinions of naturalists on this point.

36.—*Nouvelles observations sur les caractères zoologiques et les affinités de l'Æpyornis de Madagascar*; with eleven plates (*Ann. des Sci. natur.*, t. xii. 1869. In co-operation with M. Alph. Milne-Edwards).

The fragments of bone which Isid. Geoffroy Saint-Hilaire received in 1851, at the same time as the eggs of which we are about to speak, did not enable him to determine in any exact way the natural affinities of the *Æpyornis maximus*. Geoffroy Saint-Hilaire arranged it among the Short-winged birds, Valenciennes placed it near the Penguins and the Auks, and M. Bianconi maintained that it was a large Bird-of-prey nearly allied to the Vultures.

The discovery which I made in 1867 at Ambôlintsàtrana, on the south-west coast of Madagascar, of various parts of the skeleton of this Bird, has shown in the clearest manner that they come from a Bird belonging to the Short-winged family, having only three anterior toes. It is also evident that it had extraordinarily massive proportions, its feet being of a size one could hardly have imagined. These characteristics remove it from the Ostriches, the Cassowaries, and the Emeus, and

ally it more to the *Dinornis* and the *Apteryx*, although it is distinguished from them by profound differences of internal organization, amongst others by the presence of highly developed air passages, which allow the air to penetrate into the thigh-bones.

The bones which I have found show that the height of 3 m. 60 [11 ft. 9 in.] assigned by Isid. Geoffroy Saint-Hilaire to the *Æpyornis maximus* is very much too great; it would hardly in fact exceed 2 m. [6 ft. 6 in.]; but if it was not the tallest of all known birds,\* it was evidently the bulkiest and most massive one. The portions of bones of much smaller size which were mingled with those just mentioned belong to two species which present much the same general features, but which differ also in many respects. The existence in Madagascar of a group of large short-winged Birds very nearly allied to the *Dinornis* and the *Apteryx* seems to establish some new relations between New Zealand and Madagascar. It is undeniable that these birds have lived in the epoch during which man has inhabited Madagascar, but, destitute of means of defence, they were rapidly destroyed and have for a long time past disappeared.

37.—*Sur le Crocodile fossile d'Ambôlinsitrana* (*Comptes rend. de l'Acad. des Sciences*, 15 juillet 1872. In co-operation with M. Vaillant). The bones of Crocodiles which I found mingled with the fragments of those of the Hippopotamus and of the *Æpyornis* belong to a different species from that which now inhabits the waters of Madagascar (*Crocodilus madagascariensis*); for while this latter is remarkable for the slenderness and length of its snout, and is allied to the common Crocodile, the fossil species, to which we have given the name of *Crocodilus robustus*, has hardly any nearer neighbour than the convex-headed Crocodile of India, or the black Crocodile of Senegal. It is curious that this species, which I have found fossil on the west coast of Madagascar, now lives only in the great lake of Alaotra in Antsihanaka, its last refuge, where also it will not long remain, as this lake is filling up by degrees, and its extent diminishing every year. It was evidently a lacustrine Crocodile which was common in Madagascar when this island, extending far towards the east, and not having been yet overturned by the granitic eruption, was covered by enormous lakes; and here the Hippopotami, whose remains I have discovered in such abundance, were found in large numbers.

38.—*Un Voyage scientifique à Madagascar* (*Revue scientifique*, 1872). This Notice contains a general sketch of the Natural History of Madagascar, considered from the point of view of the geographical distribution of species.

Translated from the French of ALFRED GRANDIDIER,  
By JAMES SIBREE, JUN. (ED.)



\* The size of the *Dinornis giganteus* varies from 2 m. 50 [8 ft. 8 in.] to 3 m. [9 ft. 10 in.].

## TRAVELS AND PERILS AMONG THE WILD TRIBES IN THE SOUTH OF MADAGASCAR.

ON the 29th of July 1887 I crossed the river Mānantāna, two days' journey to the west of Sōatanāna, and stood for the first time in the Bāra country, which I had so often visited in thought since I baptized Jo-ba, that promising Bāra youth who so urgently begged for missionaries for his people. I first travelled three days north-west, along the said river, till it joins the Onimainty. It is a very picturesque country, with mountains shaped like cones and towers. It is only now and then that a village is to be seen, and the inhabitants are frightened on seeing a white man for the first time. Some of them try to hide; in others curiosity gets the better of fear, and these come running to have a look at the strange human being; but they keep at a safe distance, laughing, making a noise, and exchanging their opinions. Their 'kings'—although it is hardly correct to call them kings, as Queen Rānavālonā governs the whole island, but they give themselves that title—approach one after another to enquire, "Where do you come from, and whither are you going?" but none of them dare touch my hand, lest I should use secret charms to bring misfortune. On entering one of the towns I meet a drunkard, who persecutes me partly with abuse, and partly with flattery. Further on another man asks me, pointing to the moon, "Is it good? Is it God? Ought I to adore it?" We seek rest, but sleep will not favour us; *Baka* (rum) has done its work on the men and women of the village, and the noise goes on nearly all night long.

Having reached the Onimainty river, we followed it first one day's journey to the south-west, through an uninhabited country. We were not without our fears lest the unknown guide might try to join the robbers. In a little village on the border of this country he wanted very urgently to stay for the day; at the same time his companion disappeared, and this was a rather bad sign; but we prepared to set off very early in the morning, and he was obliged to give in.

We next travelled southwards for three days' journey, along the Onimainty, till we reached one of its tributaries, the Mēnamāty. In this country there were several villages, whose inhabitants received us in a very friendly manner. Only in one village, where the king was not present at our arrival, did they insist on turning us out until he came back. The king was very angry, but after I had spoken to him for a while, his anger disappeared, and he permitted us to stay. He had several women whom he had stolen from the Bētsiléo country, and probably he was afraid of their telling us about their hard lot and about his robberies.

The valley through which the Onimainty, together with some of its tributaries, flows is bordered on the west by a range of high mountains, which are the boundaries between the Bāra and the Sākalāva countries, and on the east by other lofty mountain ridges. The country here is beautiful, but not very fertile.

In one of the villages, we saw a bull being killed close to two lofty poles which were erected between the houses and were worshipped as idols. At the foot of the poles a little fire was burning, and next to this the bull was lying tied up. The idol priest prayed to the gods for wealth and success, and a long life without any illness, and 'that they might be cool.' The heat being intense at the time, one could easily understand the meaning of the last word in the prayer. At the head of the crowd was a woman with a cup of water in her hand. After the prayer, she gave the cup to the priest. He then sprinkled the water on the crowd, on the bull, and on the

idols. He looked at me for a while, as if he was thinking of giving me a splash too, but he omitted it. He then took the butcher's knife and handed it to one of the men. It was piteous to see how long a time it was before they got the poor animal killed. A little piece of beef was laid on the fire, and the rest was divided among the crowd.

One day, as we were standing by the Onimainty, the *màromita* (bearers) were amusing themselves by throwing stones into the river; when our guide called out to them, "Don't throw stones into the river, it has *andriana* (nobles) in it." He then explained to us that the *andriana* changed into crocodiles when they died.

Very often it was said to me, "The white men are like God;" but I corrected them, showing them that we were weak human beings like themselves. They then told me that Queen Ranavalona had asked the Europeans to give her a preservative against thunderstorms; and they accordingly gave her guns, which were as powerful as the thunder and lightning; thus trying to prove the correctness of their assertion. From Menamaty the Onimainty runs to the west; and hereabouts there is but little population. We followed the road to the south-west; and after having travelled for four hours, we came on high ground, from which we had a view over the western part of the Bara country. This is an extensive tract of flat country covered with palms and smaller trees and bush. When viewing these vast plains from an elevated point, one gets the impression of looking over the sea. We continued our journey in a westerly direction for two days, and then found that this low land has two rivers, the Malio and the Lalainy, which join the Onimainty. These rivers had little water, for it was at the end of the dry season, but in the wet season they are quite full, and then are very dangerous to ford on account of the loose sand in their beds. The traveller may sink so deep into the sand that it is very difficult, nay, often impossible, to get out of it again. If one but begins to stick fast, the sand carried down by the water will accumulate against the unfortunate traveller until he is buried underneath it; so these rivers are very much dreaded. Canoes are not used here, and it would indeed be difficult to use them, as the river runs with a very strong current; communication is therefore very difficult in the rainy season. Here we find a scattered population, divided between some petty kings, who are very great in their own estimation; but they acknowledge Ranavalona as Queen, and pay her homage as their 'mother.'

To the west of the low land we saw a ridge, not very high, but very long, called Lambósina, which extends from the Onimainty in the north, to the Fiherèna river in the south. This ridge lies in the kingdom of Raihandry, which is on the border of the southern Sakalava country, the kingdom of Tômpohèmana. Raihandry is one of the greatest Bara kings; and long before I met him I was told that he had 1000 warriors, 20,000 head of cattle, and three residences. It was necessary to let him know beforehand of our coming, and immediately there came back a message to say we were welcome. On our entering his town, which, however, did not exactly give an impression of any grandeur, we were met with the music of a violin and drum, which instruments had been given to him by Queen Ranavalona as a token of friendship. The king—a man of about 36 years of age—was sitting on a stone at the gable end of his house, with his retinue to the left, and his idols to the right. An immense tree in the courtyard gave us a pleasant shade; and at the back of his dwelling there were some small houses, out of which peeped his many wives. The king asked the purpose of my journey, and when I had answered his questions he seemed to be very well pleased. We soon retired and were shown to the house where we were to stay, which was in the neighbourhood of the king's residence. Late in the evening there came a man from the king to tell me that 'his majesty'



wanted to speak to me. I went and found him sitting by the fire in his house, quite alone. He gave me his hand and invited me to sit down next to him, saying there were many things of which he could not speak to me in the hearing of the crowd. The first matter he mentioned was to ask of it was not possible for me to stay with him at once and teach his people. It seemed as if the bearing of what he asked was not quite clear to him, since he also wanted charms for his gun, so that he would never miss his aim. ("How should they believe on Him of whom they have not heard?") I explained to him that it would be very difficult for missionaries to stand the climate in this low-lying land, where the fever was so deadly; so he asked me to travel about in his kingdom to see if no place could be found where it might be supposed that the fever would not be so dangerous.

It was not difficult to comply with this request, since I very much wished to travel about in that region. We went first through the northern part of his kingdom, where the population was very scattered; and here I fortunately met with the lad Joba, already mentioned. It was a strange meeting as well for him as for me, for as I had now seen with my own eyes how far away his home was, I admired still more his courage and perseverance. My meeting with him was quite unexpected; and he rejoiced in the hope that the time would soon arrive when missionaries would come and settle in the Bara country. He got leave from the king to be our guide, on condition that he did not take us to the Tanösy country; for it must not be said that a man from Raihandry's kingdom had led us where, it was reported, robbers might attack us.

We then went to the south, along the Sakalava country, and here again the population is scanty; and it was not until we came to the southern end of the district called Ilamathy, by the river Fiherena, three or four days' journey from Tolia, that we found more people, for here Raihandry has another of his residences. The surrounding country was beautiful, and there was plenty of water for the large rice plantations. As there were Sakalava robbers belonging to the kingdom of Tompothenana on the southern bank of this river, the people were in constant fear of them. One evening some of these robbers came to the village where we were staying, and tried to get the inhabitants of the place to join them in attacking us in the night. But the people would not do so, as they knew that Raihandry would make them responsible for such an action. It was very fortunate for us, both here as well as at other places, that Joba was our guide, for twice during the time he was with us it was proposed to him that he should become blood relation of these marauders and then join them in robbing us. But he only took precautions against these dangerous people and led us on in safety.

Both here as well as at other places in the Bara country we met with Sakalava from Tolia, who told with apparent joy of Mr. Rostvig and his persevering work among them. Never has our mission work in the Sakalava country presented itself to me as of so much importance for the Bara people as it appears now. There is no doubt that a mission among the Bara people and among the tribes south of the Bara should be connected with the mission on the west coast, and would receive strong support from this latter. For about a fortnight we travelled about in Raihandry's kingdom; but we went on very slowly, as several of the bearers were ill with fever. I could not of course leave them behind, but was obliged to wait till they were able to get along. During this time I spoke to several promising youths, and encouraged them to follow Joba's example, and come to our mission stations to get instruction; but it appeared that the people, having witnessed the slave-trade on the west coast, of which we have heard, had got so frightened about the white people that they dared not respond to such an appeal. It may, however, be expected that we should get plenty of pupils from different places, to be educated as teachers for their own people, if we settled down somewhere in the Bara country.

The Bara take great interest in singing; and many of the people played their national tunes on very primitive instruments.

One morning, just as we were leaving the village where we had stayed for the night, a shocking scene took place between a mother and her son. The mother maintained that glass was made of paper, but the son denied this, whereupon she got so angry that she threw the *lamba* given her by her son at him, saying, "You disgrace me and reject me as mother; you are my son no longer!" The son immediately aimed the gun that he was carrying against his breast, putting his foot to the trigger, thus intending to kill himself. His wife cried out, "He is going to kill himself! don't you see, he is killing himself, save him!" A man rushed out of his house and saved the lad, but hurt himself very badly, as in his hurry he struck his head against the lintel of the low door.

Having heard much of the people at the Salo mountains, we set out for that place, although this would lengthen the journey in going to the Tanosy country; we accordingly left Ijamathi, and on the fifth day we got to the east of the mountains. Salo is a very long mountain-range which extends from the middle of the Bara country towards the borders of the Tanosy district. At one or two places it is cut through by narrow passages which wind like a serpent through the mountain; and as the mountain wall abuts on the road on both sides, there is a saying, "The Salo road cannot be changed;" and this road is so renowned among the Betsileo, that the women plait their fine straw mats after a pattern called 'the Salo road.' When we got to the east of the mountain we found an attractive and slightly hilly plain, 1500 feet above the sea, lying before us, with a considerable population. Here much kindness was shown to us, and some people expressed their wish that we would come and settle among them. The king, Ivóatsa, who is said to have 1000 soldiers, I did not meet, as he was on a visit to one of the military stations, Ihòsy, two days' journey to the east, where also part of his territory lies. We were told that he also would be very glad if the missionaries would come and settle in his kingdom.

I had now seen a great deal of the Bara country, in which there are not fewer than 40 so called kings, who fight with each other very frequently. In order to show what Bara kings can fight about, I will give the following story. About the time that we came to Raihandry's village, he had a fight with his father's brother, Raihàra, because he had named one of his sons after his grandfather. The uncle thought that he had the greater right to make use of this name; so he and his people set out, of course secretly, and stole 100 head of cattle from the kingdom of his nephew. Some men on each side were killed, and more were wounded. The people appear to like such marauding expeditions, for one man, who seemed to be a chief, showed me his hands, saying, "Look at the soft skin on my hands; my business is to go about plundering. The gun is my spade." Most of the grown-up men among this people spoke as freely of robbing as they did of reaping the corn they had sown themselves. They also frequently steal people, for we met several persons who had been stolen from the interior provinces and who were being held as slaves. When the bearers were pounding rice or fetching firewood, these unfortunate ones would come and tell them secretly of their misfortunes and of their longing to see their beloved relatives again. It was impossible for us to do anything for them; but we hope that the Gospel of Christ will eventually put an end to this great source of misery. When a king dies, plundering expeditions are made not only into neighbouring kingdoms, but even among the subjects of the deceased king, even although they may be among his best friends! On such expeditions they kill the people and steal their cattle; and this is looked upon as one of the proper accompaniments of a royal funeral. The reason of this custom is, not so much to give the deceased king property with him in the grave, as to be a

protection for the living king; for as any one may be killed when a king dies nobody will like to be the cause of his death.

Nearly all the Bara carry on trade on the west coast, cattle being their chief article of sale; while guns, gunpowder, and bullets are bought by them in large quantities. A great proportion of the men who are capable of bearing arms have guns. In addition to guns they also use spears, but these they make themselves. As the people go about so frequently on plundering expeditions, agriculture is very much neglected; and besides this, the wild boars, which are found here in large numbers, destroy a great deal of what is planted.

As I felt pretty sure that the road by way of Ihosy was impracticable, we did not go in that direction. Joba, who was not permitted to go any further, returned to his home, and we got another guide. We then started in a southerly direction, east of the Salo mountains, in order to reach the Tanosy country; and the further we travelled to the south, the more scattered became the population. On the third day we hoped to reach one of the Bara kings furthest to the south, Raifompotsa, who has 800 soldiers. But as soon as we had passed the frontiers of his kingdom, we were surrounded by robbers; and this is how it came about: we had just come through a very narrow valley with steep mountains on both sides, along the river Sâkamare, a tributary of the Onilahy. As we passed a village named Iâbohâzo some men came running after us, requesting us to go up to the town; but as we hoped to reach the village of the king on that day, we excused ourselves. The men followed us until we stopped a little further on by the banks of the river to cook our rice. It was then just noon: I sat down to read under the shade of a tree: all nature surrounding us was beautiful; the birds sang sweetly in the tops of the green trees which grew luxuriantly on the banks of the river and up the mountain sides. The men disappeared uttering threats, and before we had finished our rice they came back, accompanied by a crowd of people, requesting us peremptorily to come up to the village. I answered that we were ready to go with them, but first they must tell me what they intended to do to us when we arrived in the village. Immediately they seized their guns and formed a circle round me, crying out, "Seize him! seize him!" A man just in front of me cocked his gun and was ready to aim at me; another, at my back, had a stone in his hand; and they had already thrown stones at my people, without, however, hitting them. I ran up to the chief of the robbers and said, "Here I am; seize me, if you like." But it seemed as if they had no power to do me any harm, although I was standing among them unarmed. They then shouted, "Seize his men! Kill his men!" As we had several times been in apprehension of robbers, I had told my bearers beforehand that they were to run off at once if we were attacked, for resistance would of course be in vain. I had, with this in view, given every one of them a little money and a few small things, so that they need not be at a loss should we be separated. They consequently were soon hidden in the dense forest. The robbers then cried out, "Take his baggage, his men have left him." But immediately some of my men were at the place, to show that they had not run away. I asked the robbers to take me to king Raifompotsa, but this request made them still more angry. As it would be possible for the *maromita* to run away if I was attacked outside the village, while if we all were once inside the town, we should be left to their tender mercies, I said that if they would not be quiet, so that we might speak to each other like friends, they had better do with me what they pleased at once, for I would not go with them. They began to call for order, but this was obtained very slowly, but at last it was possible to be heard. I tried to speak in a friendly way to them, in order to bring them to reason. I told them of the purpose of my journey, what had made me come to them, and that I intended to go to the Tanosy district. Then I said that we would go with them to the village, if they would treat us

like friends. It was of course very easy for them to give such a promise, and hey at once cried out, "Of course you are our friends! Do come with us!" Hoping that they might spare us, I promised to come as soon as all the *maromita* were gathered together. Some of them not being willing to come out of the forest while I was surrounded by the robbers, these went on in front of us towards the village. I then saw that six of my men were missing. We called out for them, and a little while afterwards three of them appeared, but the other three did not show themselves. Were they prisoners in the forest? or had they run away for good and all? we asked. We continued shouting, until we discovered them high up on the mountain above the edge of the forest. They had run up there to be able to see what was going on below on the banks of the river, but they now came running down towards us.

We followed the men, who, brandishing their spears and guns, and shouting their war-cries, led us on to the village. Soon after our arrival there we found that a gang of robbers belonging to another king lay hidden in the forest a little further on, near the road, in order to seize us, but they were disappointed. A *kabary* was then held to decide what was to be done with us. The old chief of the village at last declared, "The white man is not to be killed. The king must be consulted, and everything is to be done as he wishes." It was on Wednesday that we were seized; and on Thursday we were still kept prisoners, and it was said that we could not meet the king before Sunday. Of course I was on my guard as to our position, and I got to know for certain that they would take my *maromita*. Most of these were scholars, some from brother Meeg, some from my own station; and as they were young, they would sell at a high price. What they would do with me, I could not get to know fully. I could not bear the idea of their depriving me of my brave kind men and selling them as slaves, or perhaps even killing the oldest and most clever of them. As for myself, it was out of the question for me to escape; so I resolved to be left alone, and they were secretly prepared for trying to escape as soon as practicable, in order if possible to save their lives.

The next day, Friday, a little after noon, they were to try to get out of the village without attracting attention, as if merely to fetch fire-wood; so one by one they parted from me. In order not to be discovered, they were obliged to restrain their feelings; but it was very hard to say good-bye to each other, and it was an affecting parting, for it appeared to us as if we were to meet no more in this world. To describe all that happened to me in the immediate future would take me away from the purpose of this narrative; so I will only mention a few facts to show what the missionaries who intend to settle in this country must be prepared for.

When the last of the *maromita* had disappeared, I was left alone among these wild and cruel people. It was a trying time, for it was a time divided between fear and hope. Were my dear followers to get happily free? or were they to be caught? This question absorbed my thoughts, and I was as it were walking on hot coals. The first hour passed, and I only heard some gun-shots close by, which told me that the people were still at the celebration of the circumcision, which had been going on night and day with shouting, laughter, noise, and yelling of drunken men, ever since our arrival. The evening came, and still I had heard nothing to make me uneasy. The *maromita* must have got well through the danger for this day, and I was exceedingly happy. The Lord would carry them through the danger and be their protection in their perilous flight.

The prospect of being able to complete the journey was not very bright, but I could only leave the matter in God's hands; if it was His will that I should proceed, He would open the road, and this thought sustained my courage. I then thought about how I was to get a trustworthy

times he ran into the forest in different directions to trace them, but find them ; so then he believed it to be God's will that he was to find them. In Josefa I found a servant whom I could trust in everything. I shall quote a few lines from my diary. "I was very glad that Josefa declared herself to be ready, nay, happy, to suffer and to die for the Lord's cause should be His will. His parents are still living, and he is a married man with two children ; but he leaves them all in God's hands."

On Sunday, Raifompotsa and another king from the neighbourhood, came to the village to meet me. But as soon as Raifompotsa learned that some of the men had determined to treat me badly, he at once left me. In his country it seemed as if everybody did what he chose. In the afternoon I was called to King Ivandra and a whole crowd of people. I advanced to the centre of the gathering and sat down. (It is the custom in the Bara country to be seated when addressing the king.) I was asked, "Where are you going?" As it occurred to me that if they were to attack me, they would hardly do it in the village, but rather on the way, I said, "I will answer that question when you have told me what you have done anything wrong while among you." There was first a long silence, then they whispered to one another, then cried out, "You are to be killed!" I answered, "If I had feared to die I had not come to you. But God has given me His word, in which He says that when this earth breaks down, He will take me to Himself in heaven ; and therefore I fear death."

"You detain us ! We do not allow you to speak ; do not speak again."

"You have to a certain extent tied my feet, and you also want to tie my mouth, but, excuse me, I have not done yet. God has given us His word to keep it for ourselves, but to give it to others, and therefore to you I am in debt to you as long as we have not brought you His word. I intend bringing it to you, and this is the reason for my coming to you."

"Do not speak any longer. The king is in a hurry to get off. What presents?"

"This book (the Bible) here in my hand contains the word of God, and I will be very happy if you receive it. I will only point out to you one thing, that this word will work changes among you : when you believe in and obey His word, you will no more bury new-born infants alive in the a

"No, not to-morrow ; with us it is not permitted to start on Mondays ; but you may go on Tuesday."

"I must wait then. But who is to be my guide ? You know that both the guide and the bearers from the interior have left me, and I am sitting here like a bird with a broken wing."

"You shall have men, you shall have many men. But where are the presents ? We are in a hurry."

I gave them four *lambas*, two dollars, and two spades, for ironware is very highly valued by the Bara. But they all cried at once, "It is not enough ! The king is to go shares with the people. Fetch more things !"

I answered, "There is nothing more left of my baggage beyond what I require for the journey."

The king said, "We want a golden crown, fetch the golden crown !"

"No, I have no golden crown, your majesty."

"Hear, he has none ! No, he will not give it. Produce the gold ; go and fetch the golden crown !"

"You must believe me on my word ; I have none."

"Go and fetch the earrings and the other things," said the king.

"I have no such things."

"Fetch more things. What you have given is not enough." As I saw it would be best for me to comply, I said, "If you will not believe what I say, you may have a look at what is left, and I am willing to share it with you."

They got very noisy, and some of them cried "Let us seize the baggage ! Let us seize him now !" But others (probably fearing Raifompotsa) said, "We will not take his baggage."

The king said, "If there are no more things, we must have more money." They were given two dollars more ; and they then declared, "It is finished ; you are free."

When I retired there was a great noise : Sahanàmo, the chief of the robbers, took one *lamba* and one spade. The other *lambas* were torn into little pieces, and the strips were fastened round their heads as an ornament.

On Monday morning Ivandra came to me and searched my baggage to convince himself that I had not cheated him ; he searched everything, even my camp-bedstead, but he could only find a pillow that he could use. He asked what it was made of. "Fowls' feathers," was the answer ; but he did not believe it. (He was not allowed, by some old custom of *fady* or taboo, to touch fowls.) He was not satisfied until I had opened the pillow ; and as the house was crowded I was very close to him, so that the feathers that dropped from my hands fell on his feet. But how great was his terror ! he drew his feet back and cried, "It is fowls' feathers ! take it away, take it away ! it is disgusting !" so the fowls' feathers caused him to leave empty-handed. Afterwards one after another came demanding presents ; and the constant burden of their request was, "We have not killed you, you consequently must give us something." As they were preparing for a plundering expedition against the Tandroy tribe, they were all in a very warlike mood. They had been drinking spirits which are made of the fruit of a palm called *sàtrana* and of tamarinds, and this increased the noise.

It was a change in all this tumult, when an old woman, carrying her water-pitcher on her head, came and greeted me with tears in her eyes, and expressed how sorry she was that they intended to do me harm. A man next to her said that she had not taken any food since she heard what they intended to do. Circumstances did not permit me to speak further with her, as it was necessary to be very cautious ; but I thought that probably she had either been stolen herself, or that she had children who had fallen among men-stealers.

On Tuesday there came four men, including the before-mentioned robber chief, saying that they were sent by Raifompotsa to take me to the Tanosy country. We did not, however, get off that day, for it was Wednesday before we set away. I was happy enough to get hold of two Hova from the interior, who were here on trading business, to accompany me and carry the baggage, in addition to Josefa. Joyfully did we leave the village Iabohazo and set off for the river Onilahy, or Mangôka, as it is also called; and after two hours' march we reached its banks. Had I then really escaped? A glance at the callous face of the robber chief tended to awaken my doubts as to the possibility of ever reaching the Tanosy country. Meanwhile, the compulsory delay which this man had caused me had been a gain, for I had had an opportunity of seeing more of the calamities of those who have not received the Gospel of Christ; and the desire that this Gospel might soon be preached to the poor Bara had become more intense in my heart. The Onilahy, which at first runs to the south-west, but further on, to the west, can be navigated in rude native canoes from the place we had reached right down to the sea. In the dry season it is very shallow where the river bed is broadest, and it takes eight days to reach the sea; in the rainy season one can go quicker. On this river very small canoes are used, partly because it is so shallow, and partly because the forest hereabout has no big trees suitable for this purpose, on account of the extreme dryness during the rainless season. From two to six of these canoes are tied together; on the top are laid branches and reeds to form a kind of deck, and upon this the voyager is seated.

- The natives carry rice and other provisions down to the west coast in these canoes and sell them there. As the river, beside its shallowness, also runs with a very strong current, the people, as a rule, prefer to walk back, and therefore sell their canoes. So we were not able to hire canoes, but were obliged to buy them, in fact no less than seven. The robber chief and his men wanted four, which they fastened together as one vessel; and we required three, which were also tied together, and then off we went, getting under weigh in the afternoon. But there are only three men with the robber chief; what does this mean? He explains that the fourth man is to join us a little further on by the river; and he also informs us that the king has ordered us to fasten a piece of white cloth on a pole, so that every one who sees us may know that it is the white man, and that nobody may rob us. As such a mark may simply gather robbers around us, we suppose it to be a sign he has given to attack us further on, and we do not obey his orders. At sunset we had advanced a considerable distance, and stayed for the night on the river bank.

- The second day we advanced rapidly down this large beautiful river, which winds through the sandy lowland country. Near the river the population was very scanty. Evening again came on, and we stopped to rest, sleeping in peace, and nothing evil happening to us.

- The third day we continued our voyage. As the day advanced, the robber chief seemed to suffer very much from the sun-beams, so he put up a pole, on which he fastened his white *lamba* to get a little shade; and so, in a crafty way, he gave the signal which he had failed to make us give. We were already familiar with the thought that he was going to attack us along with other robbers. As we got on a little further, he ordered us to land; this was at the village Serânana, near the southern border of the Bara country; and here there was no small population. An hour later the missing man turned up; but he was very obstinate, and we did not know how to manage him and his comrades. They, without any reason, wanted to tie up my men, and we found that he had been getting other robbers together, for some of these were already on the bank of the river, and it appeared that the guide alone did not dare to attack us.

Hoping to save ourselves we set off rapidly. But we had not advanced very far before several armed men came after us, some running on the river side, some wading in the water. As our primitive vessel advanced but slowly, it was impossible to escape, and we very soon were overtaken and forced to land. The robber chief said, "We are going to kill you and to tie up your men." He then ordered his men to seize us; but they could not agree together; and the war-cries that were heard from several places when we had set off had caused other men, who had no evil intentions, to come running out to see what was the matter, and these men wanted to save us. This the robber chief had not reckoned upon, and so the attack was prevented. We got out of it by giving some money and a few little trifles to him and his friends.

We now wanted our dangerous guides to leave us and go back, but no, they would not do so; there was still something left of our baggage which they wanted. They had been thwarted this time; they thought they might succeed better next time. As we were in their power, it would have been foolish and useless to forbid them accompanying us any further; so we continued our journey, still hoping for God's help.

As it grew dark we halted for the night on a sand-bank in the middle of the river. During the night a crocodile came out of the river towards us; but one of our number was not asleep, and as soon as he moved, the beast made its escape. The Onilahy swarms with crocodiles; one day we saw more than twenty which lay basking in the sun near the water.

On the fourth day we met with no difficulties. We have now reached the Tanosy country; and the river continues to flow to the south-west. As the people prefer to settle near the tributaries of the Onilahy, where they have their rice-fields, we do not see much of the population from the main river. Throughout several conversations with the robber chief, I tried to direct his thoughts upwards, but it was in vain. This day, as I reminded him that he would be a happy man if he learned to pray to the living God, he answered, "Yes, if I learn to pray, I shall do it excellently, as it is very easy for me to speak." I pointed out to him that it did not depend on the words of the mouth, but that God looked at the heart.

In the afternoon we came to a place where the river was very broad, but at the same time so very shallow that it was very difficult to get along. We here got the company of 50 canoes, tied together so as to make 14 boats, laden with provisions and manned by 18 men, all from the Bara country. We had an advantage over these, for when we waded, our canoes had not much more than their own weight to carry, and so very deep water was not needed to get them along. These Bara, on the contrary, were very badly off, as their provisions made their canoes heavy; but they assisted each other until they got into deeper water. We once more rested for the night on a sand-bank; but we went forther off from the river, so as to be safe from the crocodiles. The Bara settled next to us, and we thus formed quite a large company. We got into a very lively conversation, and found it quite pleasant in the clear but slightly cool evening, sitting around the fire, where we cooked our rice. The Bara were very scantily clothed, and lay down to sleep on the sand around the fire, covered only with little straw mats. When they got too cold, they rose, put some more wood on the fire, and then lay down to sleep again.

Next morning we bade farewell to our Bara companions, launching our canoes on the river with the hope of gaining the western part of the Tanosy country that day. From here the river turns to the west, and as the water was deeper we got along quickly. Some mountain tops were seen rising from the lowland, thus offering a change in the tiring uniformity. When the Onilahy turns to the west, we have the Mahafaly people on the south of the river, and consequently are travelling on the borders of the Mahafaly



and Tanosy countries. In the evening we reached the western Tanosy country, and the river voyage was finished. We intended to visit king Befanosa, but his residence being situated a couple of hours' walk from the river, we could not get there that day; and not daring to stop in any of the villages, we prepared to lie down by the river side. It was with mingled feelings I sent a messenger to the king to inform him of our arrival. Is he a capricious prince, who will perhaps keep us waiting for days before he gives us permission to travel about in the country? Will he, under some pretext or other, refuse me leave to continue the journey? or will he receive me as a friend? To these questions I very soon got an answer.

The next morning we saw a crowd of people hastening towards us. It is the king and his retinue. He approaches, shakes hands with me, salutes me as a friend, and sits down next to me. He is a man of about 30 years old. He carries two horns with charms on his head, one on each arm, one on each foot, and besides these a chain of charms on his breast. One of his men thus begins the conversation: "On hearing that you were here, the king set out at once to invite you to his village. He is your friend, and he does not allow you to lie here on the sand, as there are many rats (robbers) hereabout who have not got enough to live upon; and he therefore asks you to go with him." I thanked the king both for his friendly expressions, and for his having come in person to take me with him. A little talk with the king, and we are ready to start. It is hard work to walk in the intense heat (51 R. in the sun), but we soon came to our destination.

When we had entered the village, the king asked about my journey. He was told that I wanted first to see the Tanosy country, and then to go eastwards to Fort Dauphin. To this he answered that he thought it impossible to go by land on account of the robbers. He advised me to go to Tolia and take a ship from thence, and he offered to accompany me to Tolia. But I could not take his friendly advice, as I should then have no opportunity of seeing the country to the east. From the Manantsa it is three days' journey, whether one goes by canoe on the Onilahy and later on by sea, or goes by land. The population west of the Tanosy country are Sakalava, but they are said to be very scattered.

I stayed two days with king Befanosa, who was very friendly and gave us two guides to take us through the Tanosy country and further on to Fort Dauphin; so the prospect of continuing the journey now seemed very bright. After having given some small presents to the king we were ready to begin the journey, the first stage of which would take us to his elder brother, king Befitory. But as we were about to start, the robber chief came and forbade us leaving. He tried to stir up the Tanosy people against us, and to get them to join him and take what was left of our baggage; but he only persuaded two of them to do so. I told them that there was but very little left, and if they were going to rob me of that, I had nothing to buy food with on the road, and I should be forced to stay where I was; and if the people at the place would give me something to eat, I should live; if not, I must die. On hearing this the crowd got quite excited. They reproached the men very severely, and said it was a shame to deprive the white man of what he wanted to buy rice for the journey. The robber chief was then obliged to submit, and I bade good-bye to the king and the people, and off we went.

After three hours' walk we got to the village of king Befitory, Kiliarivo, where a number of people were assembled. Befitory is a handsome pleasant man of about 39 years of age. Both he and his people received me in a very friendly way, and expressed their longing for a missionary. The king said, "If you come to teach us, my children are to be your first pupils."

We were shown to a house near the king's residence, and the robber chief, who still followed us, asked to stay near us, as he wanted to protect us! What a hypocrite he was! Up to this time I had avoided contradict-

ing him, in order not to give him any pretext for attacking us; but now I found the time had come to oppose him decidedly. I therefore answered that it would be a shame if I did not feel safe without any guard in the village of Befitòry. The king, who understood his designs, gave him a house in another part of the village; I for had secretly informed the king of my unpleasant position, and he immediately understood what to do. In order to get rid of the robber-chief he kept him in ignorance as to the direction he would send me, and when I should leave. The robber chief understood the king quite well, and not daring to stay any longer, he and his three men left. Thus at last I got rid of this man, after having been in his power for ten days; but I had been in the Lord's hands, and I felt like a bird that had escaped the snare.

We stopped one day with Befitòry, and then set off in an easterly direction through the Tanosy country. We saw that the greater part of the Tanosy live on the western side of the Onilahy.

These people have emigrated from the country about Fort Dauphin, where the original tribe is still living. It was about the year 1860 that they emigrated, on account of the governor's hard treatment of them. They made their way to the Onilahy by conquering the Bara to the north and the Mahafaly to the south. The Tanosy are a strong, handsome, intelligent, and sympathetic people, promising to receive Christianity, when the Gospel shall be preached to them. Wherever I met with them they received me with open arms, and many of them said that they would learn whenever we came to teach them.

These people live in a scattered fashion, and are divided among 22 'kings,' which will make it very difficult to carry on mission work among them. But it will be an advantage that the communication with Tolia is comparatively easy, the Onilahy, as before mentioned, being navigable. A mission amongst this people should make it an object to reach the Mahafaly people on the south side of the river. It is said about these Mahafaly that they sell even their own children.

Having gone two days' journey to the east, we left the Tanosy tribe and went on southwards, first passing through a desert for three days' journey. Water is very scarce here, and we had to content ourselves with the stagnant water that had been left in the hollows of the river-beds. In this tract of country we missed our road. In the eastern part of this same desert the lofty Ambàhy mountains are seen towering aloft. We passed over them and gained a plain country, where there lives a mixed population of Bara and Tanosy. We stopped at the village Iàboàloka, where the armed men of the place were just going off on a plundering expedition to the Tanosy tribe. I felt very sorry for these handsome strong people wasting their lives in the bondage of sin. They so little realize their sinfulness that they wanted me to look into 'the book' to know if they were to get much plunder. They took with them lads of about 14 to 15 years of age, who thus early are taught to shed blood. They were, however, very friendly to us, and let us buy what we wanted for food in the desert through which we had to pass.

We continued our journey over the Tsitònganakànga, a mountain 4,000 feet above the sea. We stopped for the night by a rushing river, and from this place and onwards we found plenty of water. On the third day we came to a beautiful plain surrounded by mountains and with a fair population. This was nearly in the centre of the island, and five days' journey to the south of the military station Ihosy, on the borders of the Bara and the Tanosy countries. There were some Hova traders living in the village Tsivòro, and three of these had just come from Ihosy on the day of our arrival. When they left Ihosy, they were five in company, but they were attacked by robbers, and two of them were killed and all their goods taken, the other three escaping. On the same evening some of the inhabitants of the village returned from a

plundering expedition to the Tandroy country. They obtained no booty, and their chief had been killed, and they had not even brought his dead body. The whole night we heard funeral songs and firing of guns, both in the village and in the neighbourhood.

It is to be hoped that a mission amongst the Bara will also reach the inhabitants of Tsivoro and spread blessings among them. The Hova whom we met with here tried to discourage us about reaching the south-east coast. They reminded us that on this road the governor Andriamisy, who left Fort Dauphin during the war with France, was attacked. He and his soldiers having been beaten, he, his wife and children went to the supply of gunpowder which they carried with them, put fire to it and thus found their death, and his body was cut to pieces by his enemies. Another Hova officer, Rainial-bèta, was here surrounded by the inhabitants and barely escaped. On this road they also tried to conquer the governor Rainimavo on his journey to Fort Dauphin, accompanied by hundreds of soldiers. I was very glad that they had no authority from the Government forbidding us to go, and so we cheerfully continued our journey.

We had to pass for nearly three days' journey through an almost uninhabited forest region. On the third day we reached a pretty broad valley, Isira, where the inhabitants received us in a very friendly way, and where we could easily buy what food we wanted for the journey. On leaving this place we had a rather difficult ascent to the top of the high mountain Sâmbolâhy, about 4000 feet high. At sunset we had passed this mountain and came down to the narrow valley Fiahâna. We prepared our sleeping-places in the forest, among some huge stones, as we did not dare to stay with the inhabitants, who had a very bad reputation. The night before they had attacked seven travellers who slept among the rocks; five were taken and made slaves, and two escaped; we met the latter in the forest, and they told us what had happened to them. On a tree in the neighbourhood of the rocks we found an idol-horn or charm embroidered with beads, which had probably belonged to one of the unfortunate men.

A valued little friend who met us everywhere on the journey, but especially in these regions, was that excellent singing bird, the *Fitatrâla*.\* The next day we passed the grand mountain-chain Mâropingâratsa ('Many guns') about 4,000 feet above the sea. It has a number of cones closely resembling each other, and arranged in ranks, one in front of the other, exactly like soldiers prepared to meet a common enemy; and from this circumstance comes the boastful name of the mountain. But let us hasten down to the bottom of the valley of Ambôlo.

The next day we reached a pretty densely populated, beautiful, and exceedingly fertile valley, and have thus come to the eastern Tanosy tribe, and are only three days' journey from Fort Dauphin. The kings of this district are at war with each other, which prevents the people from cultivating the fertile soil. Everywhere in the eastern parts of Madagascar, where the rain falls all the year round, there is a very rich vegetation, but nowhere I have seen it so luxuriant as here. Every piece of ground, every stone and every mountain, nay, every stem of the larger trees, was adorned with the most variegated kinds of verdure. It was impossible to get tired of looking at the multitude of plants to be found here. One day, having but very little to eat, we sought for bananas in the lower part of the forest, which had formerly been inhabited, and we found them in abundance. On one single stalk we found 176 large bananas, which shows how fertile the ground is here. The fruit not being quite ripe, we roasted them on the embers, or boiled them, and they tasted pretty well. In the valley there is a spring with remarkably hot mineral water.

\* A species of Warbler (*Copsychus pica*).—EDS.

We then turned to the south over the mountain Ivàndrika, where there are hordes of leeches, here called *dimàtika*, which are very troublesome to the traveller, attacking his legs, and sticking so fast that it is very difficult to get them off. After only walking a few steps one is covered with from ten to twenty of these creatures, which must be got rid of. Again a few steps forward, and it is the same story over again. It is very fortunate, however, that these unwelcome visitors do not occupy a space larger than can be covered in four hours.

Having passed the mountain we are in the low land by the coast, and the country is very attractive, but the population very small, on account of the massive emigration to the Onilahy district. We continue our journey northwards towards the sea. A skull lying by the road-side tells us that a Hova soldier has finished his course; and it also tells us that the relations between the soldiers and the Tanosy are not very friendly, or the soldier would have found a grave for their dead brother to rest in. After one day's journey over plains we reach the sea; then turning to the east, we go for a couple of hours along the sea-shore, and we are in Fort Dauphin. It is just five weeks since we left the village where we had been kept prisoners. All this time I had walked, drunk bad water, and slept thirteen nights in the open air, but nevertheless I did not get the fever. Often the doctor seemed shut up for us, but we had come safely through, and great was our joy on arriving here.

Both the Hova authorities and the soldiers, as well as the three white men who live here, received us in a very friendly way. Many persons here take with evident interest of what they had heard about our mission on the west coast. Sakalava sailors on board the vessels trading between that coast and this place had told of the grand work of our missionaries there. Fort Dauphin is situated on a small peninsula only a little to the east of a magnificent mountain with jagged summits, which towers over the west of a sandy low land by the Indian Ocean and extends far to the north, thus greatly contributing to the grandeur of the scenery. The fort on the northern end of the peninsula looks strong, and it withstood very well the attacks made upon it by the French shells during the late war. Inside the walls live about 500 soldiers, all from the interior, mostly from the Betsileo country; and some of them being Christians, they have built a small church. Outside the gate some Tanosy have settled; and farther to the south the Hova traders have their houses and gardens. The soil hereabout being sandy there is very little, indeed scarcely any, population here. It is a day's journey to the west and one day's journey to the north before a population worth mentioning is met with, and consequently food is very expensive.

The district governed from Fort Dauphin extends two days' journey to the west, and five days' journey to the north, besides a good distance into the interior. The population of the district belongs to the Tanosy tribe, and is altogether insignificant, although very scattered; and it is divided up about thirty feudal kings, as they term themselves. As this tract of its western part borders on the Tandroy country, it may perhaps be possible from here to spread the light of the Gospel into that still unchristianized region.

After having stayed for one day here we set out northwards, now getting on at a quicker rate, as I had obtained bearers. We passed through a tract of moderate breadth, in parts of which the road was very near the sea; as the country is traversed by a number of deep rivers, the traveller is very often obliged to use canoes, which makes the journey exceedingly troublesome.

In the plain country, which is very sandy, the population is very sparse, but there are more people near the mountains, where the soil is more fertile.

The emigration from here to the Onilahy district accounts for the scanty population of this vast extent of country. After five days' journey through this lowland we gained the river Mānampanihy, at the northern border of the Tanosy country, and were then at the junction of the two districts under the Fort Dauphin and Vangaindrano governments respectively. The river Mānampanihy comes from the previously mentioned Ambolo valley, and is navigable with canoes for a good distance. The country hereabout is very pretty, but the population is still scanty. Coming into the Vangaindrano district, we find the plain broader and the population larger than to the south of it. On the first day we reached the river Matrio, to the north of which lies the populous village Iāvibōla. One day's journey to the north we find the river Sāndraviniāny, and three large villages, two of which are built on islets in the river. The people here gave us a good impression of themselves, and wanted us to come and teach them.

After another short day's journey we came to the large river Mānambōdro, which has several islands in it, and on one of these the principal village is built. I went up and down this river in order to see the country. Near the sea a white trader is living, whom I went to visit. He has been here for about a year. Another foreign trader, who had been living here for twelve years, was killed along with his servants, and all his goods were stolen. The place has no harbour, and ships calling here have to anchor in the open sea. This region is well peopled, and it seemed as if some of the natives longed for a missionary, for they said to me, "We will keep you back; we will not allow you to leave us." One of the kings said, "It is no use for me to become a *mpivavaka* (praying one), for I have many wives." But when I shook hands with him to bid him good-bye, he said, "Do come back to teach us, and I will send away my wives."

Another day's journey further to the north, and we reached the largest river of the south-east coast, the Māsihānaka. Near the sea the river widens into a little lake, in which there is a low but long islet with some villages; but the population here is only half of that at Mānambōdro. Here also the people asked me to come and live among them. Only one short day's journey more, and Vangaindrano is reached. It was now more than ten years since I was at this place, intending to go from there to Fort Dauphin. But the governor forbade my going, fearing that I might be attacked by robbers on the road. The man I then got to know best met me a good distance outside the town, and we immediately knew each other as old friends. Here also there are some soldiers from the interior, and both they, as well as the present governor, Rainitsimba, received me in a very friendly manner.

In Vangaindrano there is a little church in the military town, and a similar one outside the gate, both conducted by the governor. Looking about we soon noticed that there is a large and dense population on both sides of the river Mānanāra; this runs to the north of the town, which is situated about a couple of hours' distance from the sea. The district of Vangaindrano extends five days' journey to the south of the Mananara, but it goes only a little distance to the north of this river. The people in this region call themselves Taisāka, and are divided among about 30 feudal lords, whose power diminishes as the Hova power, represented by the governor, increases. These people seem to long for the time when they shall be able to hear "the good news." One of them said to me, "Joyful, joyful, joyful, nay, very jubilant shall we be, when you come to live among us."

Thus the exploratory journey with which I was charged by the last Conference had come to its end. I began it on the 20th of July and got back to my station on the 26th of November. The Lord had protected me, and He had also protected the kind *maromita* I had been obliged to send away, for none of them had died on the road, in spite of all the perils they had gone through.

In conclusion, I have to add a few remarks about the regions I have passed through.

The Bara country is very sandy and stony; the *maromita* were obliged to wear sandals almost always to protect their feet against the stones, and it is very dry and consequently unfertile; and this is also the case as regards a part of the Tanosy country near the Onilahy. In the dry season one very seldom sees even a clouded sky, to say nothing of rain; the air is exceedingly hot, and the vegetation suffers very much, so that in many places it is a long distance between each root of grass, and what grass is seen is dry and faded. But the trees growing here have a greater power of resistance to the dryness, and many kinds of trees are green all through the rainless season, and the leaves are used to feed the cattle. This statement also applies to the *raiketa* or prickly-pear, which is used all over the island as a living fence. In the southern part of Madagascar it is also used as food for the cattle; for the people burn the grass surrounding it, and thus it is scorched or roasted sufficiently to make it eatable. In the Mahafaly and Tandroy countries, where water is very scarce, the inhabitants when travelling eat the fruit to satisfy their thirst.

But there are many river-beds, and even if these are almost dry, there is a pretty fair vegetation along them. On the vast plains in the southern Bara country, which are covered with grass, heather or brushwood, one can see from a long distance the direction of the river-beds from the lofty luxuriant reeds growing along them. The people settle wherever water can be led out over the fields; but on account of the sterility of the country, food is very expensive, and it was often very difficult to get the rice we required. In the eastern parts of the island it is quite different; the rain here is abundant, and the soil is very fertile, with the exception only of the tracts near the sea. Rice, manioc, sweet-potatoes and Indian-corn are grown everywhere.

The clothing of the people is much the same as that used the interior; the *ambra* is the principal article of dress, only it is poorer. The Taisaka form an exception to this rule, wearing a kind of narrow skirt without gatherings, made of fine plaited straw, and extending from the knees to below the arms, and kept together by a belt. Both men as well as women among these people plait their hair. Among the Tanosy, however, some men may be seen with their hair cut short. The Bara roll the plaits together like balls round the back of the head, and it looks as if they wore a crown of balls. To make themselves smart—to their taste—and to make the balls big, they rub white earth, ashes, and suet into them, so that it is as difficult to see the hair at all.

The houses everywhere are very small; they are made of slight wooden frame-work filled in with reeds, long grass, rushes, or the stalks of palm leaves. The roof is covered with grass or palm leaf.

These people are sunk very low under the heavy yoke of idolatry, and are heavily burdened by it; but even in these dark places we find man to be the only one of God's creatures who is conscious of a God and prays to Him. The women, especially by the Bara and Tanosy, are looked upon as slaves. Once I asked some men, "Why do you not permit the women to take their needs along with you? Why are they to wait till you have done, and consequently get their food cold?" They answered, "The woman is our slave; if she will not wait, we give her a blow on the head till she is done for." Polygamy prevails among these people.

Let us look at the condition of the new-born children. When a child is born, it is the custom to ask the sorcerer if it has a good or an evil fate. If he says that it is born on an evil day and consequently has an evil fate, it is believed that if permitted to live it will cause the death of its father or mother. The father, for this reason, either buries the child alive in an ant-hill, or he throws it into the dense brushwood; or, more rarely, following the sorcerer's directions, he places it in the way of the cattle. If the cattle do

not tread upon it, it is permitted to live, and thus sometimes the parents get their doomed child back again, but sometimes not, as it all depends on the sorcerer. If the child can be saved, he directs how it is to be done. But what is invariably required for such recovery is, to sacrifice an ox to the gods. It is the custom among the Bara to dig a little tunnel through the bank of the river, and while the bleeding animal is lying close by, the child is carried through this tunnel, until it falls into the river, where it is received by the father. Part of the sacrificed animal is then buried in the tunnel. On the south-east coast the blood of the animal is rubbed on the forehead and behind the ears of the infant. Then a strip in the shape of a large ring is cut out of the skin of the animal, and the mother with the baby at her bosom must pass through this ring. The child can also be saved if a stranger adopts it and brings it up as his own.

As to the idols of these people, they may be divided into three classes. There are personal gods, which only protect their owners, and must always be worn on the body. There are also village gods, which protect the village that owns them. These consist of poles of various lengths, sharply pointed at the top. They are erected inside the village gates, and in some villages there are as many as eleven poles arranged in one or two rows. There are also some very primitive images cut in human shape, standing either above or outside the gates, with spears in their hands. These gods are believed to be able to protect the village against enemies. Lastly, there are national gods, to whom everybody may pray. A tree, a stone, or a heap of stones in the woods, may be such a god; and in the Bara country a number of trees are worshipped. We often witnessed such trees invoked by cutting into the bark with a spear, as if to make sure that the prayers offered would be taken notice of by these deaf gods. In the western Bara country I noticed such an idol, a fine lofty tree, protected by a fence of thorns. Inside the fence, under the shade of the tree, there were put up 26 pieces of wood with round heads; these things represented the worshippers, standing praying to their god night and day, and are regarded as intercessors for those who had put them there. I have never seen anything like this anywhere else in this country.

Let us hear some of their proverbs, to get an idea as to how far their thoughts and imagination go as regards the God of heaven.

"All men are the children of God, but the white men are his first-born children." "The little children play, but their mother (God) watches them." "Do not try to find a hiding-place, for God sees thee." "The chicken drinks water, raising its head to God." "Do not turn thy feet against God, like the flying-fox;" He (God) hates this, as He has made thee" (for something better).

There is also some idea of immortality found among these people. The Bara, in cases of illness, apply to a kind of astrologer in order to know whether the illness will be fatal or not. These astrologers look at the stars, and if one of them, in their opinion, draws nearer, it is to fetch the soul of the sick person, and death is inevitable. And they have a proverb which says, "The body belongs to earth, the soul to heaven." Among the tribes of the south-east coast it is a custom that all who have been present at a funeral, after the ceremonies are over, throw sticks at the tomb to prevent the spirit of the dead from wandering about.

It was with sadness I saw these tribes in their misery. In different ways they all reminded me of the call, "Come over and help us." I shall never forget a man of the Bara tribe whom I met on this journey. He told me of his child, which had been born on an evil day, and how he succeeded in saving it. At last he cried, "Do come and live amongst us, and I will be the first one who comes to you to learn the Word of God."

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\* The flying-fox often hangs in the trees by its feet.

One day we came to a village to the east of the Onilahy, where an infant had just been buried alive in an ant-hill. In the evening the mother was so distressed with sorrow that she did not know what to do. One of my men, witnessing her sorrow, said to her that she ought to go and rescue her baby, as it was a gift from the living God. The poor mother listened to these words and went to the grave with a trembling heart, fearing that the baby might already have expired, and yet hoping to find it still alive. She dug it out of the ant-hill and found it still living. But when she reached the village, her husband was very angry and said, "You are never to cross my threshold with this child; otherwise you may do with it just as you like." Here again misery reigned, "Come over and help us."

One evening I sat talking with some men from the south-east coast about the many murders of innocent infants committed through idol-worship. One of the number, a handsome intelligent man, said, "My name is Mânambintana (meaning (good) fate), for when I was born, the sorcerer said it was on an unlucky day, and I had an evil fate; and I barely escaped being buried alive, for the grave was already made. But just when they were going to bury me, a woman and his wife came and wanted to adopt me as their child. They were not but childless people, and their request was complied with. Thus it was that I had a good fate, in spite of the sorcerer's word. But my relatives have despised me, and I always have been, and still am, a stranger here." This man and his companions expressed the wish that we might come and teach them, and it was again as a call from many lips, "Come over and help us."

*Translated from the Norwegian of J. NIELSEN-LUND,*

*By JOHANNA BORCHGREVINK.*



## SIKIDY AND VINTANA:

*HALF-HOURS WITH MALAGASY DIVINERS. (NO. III.)*

*(Concluded from ANNUAL No. XI.)*

### VINTANA AND SAN-ANDRO.

**V**INTANA. What is *vintana*? If a man was ill, people often said, "Perhaps the *vintana* of his son is too strong for him, or he has become subject to some misfortune," so they said, "*Vintany izany angàha*" (perhaps that is his *vintana*); or perhaps he was perpetually unsuccessful, and they said, "*Olona ràtsy vintana izany*" ("This man must have a bad *vintana*"). Sometimes even immorality (e.g., an unmarried man becoming pregnant) was excused by the remark, "*Vintany hidny ha izany*" ("Perhaps that is her *vintana*" [destiny]), meaning that there was no helping it.



Now what did all this mean? It is rather difficult to give a clear and conclusive answer to this question. *Vintana* was like the *fatum* of the Greeks and Romans, an invisible power that made itself felt always and everywhere. If I were to venture to form a theory of it (or, rather, to reproduce the theory of the natives, by stating explicitly what I think is the view they hold implicitly, it would be to the following effect:—

1. Earth is not governed by itself, but by heaven. Not only is the succession of night and day settled by the most glorious heavenly bodies, the sun and the moon, but the fitness or unfitness of times and seasons for various work to be done, as well as the destiny of man himself, depends upon the heavenly bodies.

2. As far as mankind is concerned, the stars forming the constellations of the Zodiac are all-important. Their influence is manifested in two respects: they decide the destiny of a man; and it depends upon them whether a certain time is fit or unfit for certain kinds of business.

3. The destiny of a man (his *vintana*) depends on what day he was born (partly also on what time of the day), or, rather, on what constellation of the Zodiac governed the day of his birth. It was therefore incumbent upon the *mpamintana* (those who dealt with the *vintana*), or the *mpanandro* (day-makers or -declarers), who were also *mpisikidy*, to enquire about the day or time of the day of a child's birth in order to make out its *vintana*, i.e. under what constellation it had been born, and what influence this would have on its destiny.

4. As the names of the constellations of the Zodiac also became the names of the months and of the days of each month (at least here in the interior), it is not clear what influence was attributed to the moon; but that it was not considered to be without some influence appears from the following facts:—(a) Although the days of the month had seemingly borrowed their names from the constellations of the Zodiac, they really represented the 28 moon-stations (*Manazil-ul-kamari*), as I have pointed out elsewhere (ANNUAL III., p. 131). In the interior of Madagascar these names have been superseded by a somewhat simplified nomenclature; but on the south-east coast the true names of the moon-stations were, in Flacourt's time, still the names of the days.\* (b) The Malagasy year was a lunar year (354 days). (c) Both the sun and the moon take their place among the planets as governors of the days of the week (cf. 5, below).

\* These names I have given in the article quoted above. In the interior the names of the days in a month were arranged in the following way: (a) The houses are generally built with their length running due north and south. (b) Four of the month-names were considered as attached to the corners, and two to each side, of the house, beginning with *Alāhamādy* (north-eastern corner), and ending with *Alohōtsy* (the last one on the northern side). (c) In naming the days they made use of the month-names in the same order; but as there are more than 12 days in a month, they borrowed 3 day-names from each of the 4 month-names that fell on the corners, and 2 from each of the 8 that fell on the sides, of the house. This would give 28 days. But as a lunar month has from 29 to 30 days, they added 2 days to each of the 4 corner-months, and one to each of the 8 side-months, and 2 days at the end of the year, so as to make it 354 days (a lunar year). For particulars, see Ellis's *Hist. of Madr.*, vol. i. p. 445-457, where a pretty full and tolerably correct description is given, therefore I do not enter more fully into this here. But I may remark that when he invariably calls the 2 days that get their names from the same month severally *vava* and *vōdy* (its *mouth* and its *end*), and calls the 3 *vava*, *vōnto*, *fāra* (its *mouth*, its *increase*, and its *end*), this does not agree with the information I have got from my native friends. For *Alāhasity*, *Asombōla*, *Alakarābo*, *Alakaosy*, *Adālo*, *Alohōtsy*, my helper also speaks simply of *vava* and *vōdy*; but for the remaining 6 months he has partially

5. Besides the division of the year into months in the manner briefly pointed out in the note below, the Malagasy have from time immemorial known a hebdomadal unit, the week, the days of which have Arabic names. These days were thought to be under the special influence of "the seven planets" (i.e. what were by the ancients so called, viz. the Sun, the Moon, Mars, Mercury, Jupiter, Venus, and Saturn), which will be shown more fully under *San-andro*.

These are, I believe, the chief features in the astrological part of the Malagasy *vintana* doctrine, as known at present.

It is easy to see that the whole life of a Malagasy would be under the influence of these heavenly bodies, and consequently at the mercy of those who had the reputation of understanding these often very intricate affairs. People are generally under the spell of those who know their destiny beforehand (while they do not know it themselves), who have the power of remedying the evils of it, and are able to tell them both *what* they ought to do, and *when* (on what days and hours) they ought to do it. When we remember what great influence astrologers had over emperors, kings and princes during the Middle Ages and even far into the 17th century (see, for instance, the history of a man like Wallenstein), we can easily understand what power they must have had in a country like this.

I do not intend to enter at all minutely into the doctrine of lucky and unlucky days, a subject with regard to which I will restrict myself to a few general observations.

1. Although the different months were thought to have their peculiar character (being governed, as was supposed, by different constellations), their special *fdditra* and *sdrona*, etc., it does not appear that one month was considered more unlucky than another. The difference in this respect was a difference between the different *days* in the month.

2. The character of the days evidently did not depend so much on from what month-name it took its name, as on what moon-station it represented. Therefore we often find two successive days with the same general name, of which one was considered good, the other bad. E.g. the 1st and 2nd of Asorotany were good, and were, and are still, favourite days for *famadihana* (the ceremony of removing corpses from an old family grave to a new one); but the 3rd one was considered bad.

3. Some days were considered absolutely bad, e.g. the 3rd of Asorotany, the 2nd of Asombôla, the 2nd of Alakaosy, and the 1st of Adijady; others were absolutely good, e.g. the 3 days called Alâhamady and the 2nd of Alakarâbo; others again were considered indifferent (*tsy tsara, tsy ratsy*), e.g. the 1st and 2nd of Alâhasâty.

or wholly special names for the 2, or 3 days which borrow their names from each of them, viz.—1. The 2nd of Alahamady he calls *Akôndron* 'Alahamady (the 'banana' of A.). 2. The 1st of Adaoro he calls *Tandrok* 'Adaoro (the 'horn' of A.). 3. The 1st and 2nd of Adizaoza he calls *Ravina* ('leaf') and *Vohitr* 'Adizaoza ('town' of A.). 4. The 2nd of Asorotany he calls *Akôkon* 'Asorotany, and the 3rd of the same, *Akifik* 'Asorotany. 5. The 1st of Adimizana he calls *Vavan* 'Alakafôra (the corresponding moon-station is *Al-gafra*); the 2nd of Adimizana, *Ampaningan* 'Adimizana (perhaps a corruption of *Az-zubani*, the corresponding moon-station); and the 3rd of the same, *Fara-adikididy* (the corresponding moon-station is *Al-ikhilu*). 6. The 1st of Adijady he calls *Ranomason* 'Adijady (the 'tears' of Adijady); the 3rd of Adijady he calls *Apanaparan* 'Adijady. It will be seen that some of these names are corruptions of the Arabic names of the moon-stations; others (e.g. *akoka, akifika*) are at any rate not Malagasy words.

4. Some again were not considered good in general, but still good for special purposes; e.g. the 1st Alakarabo was excellent for entering upon family life (*milôkan-trano*); the 2nd of Adijady was good for marking out the ground for a new town; and the 3rd of Adimizana was a lucky day to be born on, but a bad day for business.

5. Some days had a special peculiarity of their own; e.g. children born on the 2nd of Adalo generally became dumb! so they said.

6. Even the bad days were generally so only in the sense of having too strong a *vinlana*. This was especially the reason why children born on those days were considered a very doubtful gift. They were *mahery vinlana loatra* ('had too strong a *vinlana*'); and if their parents and other relatives had not been born with a *vinlana* equally strong, it was very likely they would come to grief sooner or later through the *vinlana* of the child. Hence the infanticide in former times in the central provinces of Madagascar. Generally, however, the *mpisikidy* managed to remedy the evil in one way or another. Often nothing more was required than to give the child a name which intimated that it would *not* do any harm in spite of its strong *vinlana*. Hence such names as *Itsimanôsika*, *Itsimandrâtra*, *Itsimanôho*, *Itsimanôlaka*.<sup>\*</sup> Those born on the 2nd of Adalo were often called *Itsimarôfy* ('one who does not become ill') to avert the danger of dumbness. Some days, as the 3rd of Asorotany, Alakaosy, and the 1st of Adijady, were considered exceptionally bad; but still I think it was very seldom that a child was killed because of its *vinlana*. At least it is my conviction, after a close examination of this point, that the terrible pictures of the great extent to which infanticide was carried here have been greatly overdrawn (by myself among others, in my work on Madagascar).

I mentioned above that the different months (and then, of course, also the days named after them) had their fixed places assigned to them at the corners and along the sides of the house. My native helper gives me a number of rules referring to the regard the inmates of the house had to pay to these circumstances, but I shall not try to reproduce them in detail here. The substance of the whole, however, is, that they, on *each day*, had to take particular care not to go to the corner or the side assigned to that particular day, or, at all events, not to place a sick person there; for by so doing they would *manêtra ron-tàny*, i.e. attack and provoke the spirit (of that region) of the earth; *ro* I take to be the Arabic *ruh*, spirit, as the Malagasy word *ro* (gravy) would give no sense here.

What is in the interior called *vinlana* (Ar. *evinat*, seasons) is among the Sakalava called *andro* (day or days). Both mean the same thing: the time or season, as depending on the heavenly bodies and influencing destiny and actions.

The *mpamintana* were generally *mpisikidy* as well, and as the most clever *mpisikidy* were also *mpisorona* (idol-priests), it appears that the *vinlana* is really the key to the whole system of idolatry here, and to everything connected with it,† at least so far as it got any real hold on the people's mind. (The idols properly so called were perhaps not directly

\* All expressing in a general way that the child would be harmless.

† This is also acknowledged by the natives themselves. I may refer the Malagasy scholar to several lengthy articles on this subject (in Malagasy) in *Folk-Lore and Folk-Tales*. The author's want of precision and good order, his diffuseness and great verbosity, and the some-

connected with the *vintana*; but therefore they had *not* so much hold on the people.) Much of the terminology of the *sikidy* also points to its connection with the *vintana*, as I have shown in the first division of these articles (ANNUAL X.); but the theory of that connection has been lost. I feel satisfied that even the more practical procedure of *sikidy* rests on the same astrology as the *vintana*; but I am unable to demonstrate this connection in detail, or show how the *sikidy* gradually developed from these astrological theories. This cannot, I think, be done without a careful examination of *sikidy* and astrology among Eastern nations in ancient times (Arabs and Persians especially), and I have not the means of doing this here. Neither do these means seem easily accessible. Through learned friends I have made enquiries in this direction in Christiania, Leipzig, London, and Leyden, but without success. But when I get to Europe I shall keep my eye on this subject, as it has once caught my fancy and is not without considerable interest.\* What I have aimed at in the preceding remarks has not at all been to give a full description of the *vintana* and all the practical outcome of it, but only to point out the leading ideas, the general theory of it, so far as known at present; and, at the same time, to show how imperfect is our knowledge, and what points especially are still waiting for further investigation. If I should not be able to push the matter further, others may be able to do so. It is, at any rate, an advantage to know 'where we are.'

NOTE.—The suggested etymology of the word *vintana* was first given in my article in this magazine twelve years ago (ANNUAL II. p. 79). As will be seen from the passage quoted, I gave it with some hesitation and diffidence, and this has rather increased in the meantime. In fixing upon this etymology I was less guided by the internal probability, than by the fact that *sikidy* and *vintana* in Malagasy are evidently of Arabic origin. Still this does not necessarily imply that the word must be Arabic too. What made and still makes me hesitate is, that the Arabic *evan*, *evinat* does not seem to be used at all in reference to astrology; and that it is difficult to see why the Arabs did not introduce a specific astrological term, if they were unable to find a Malagasy word whereby to express the idea they wanted to convey to the people. I felt this at the outset, and the etymology suggested was chiefly the consequence of my being unable to find a Malagasy word from which *vintana* could be derived. We certainly need no argument to prove that *vintana* cannot, in his sense, be a primitive word, as people surely do not at once form such transcendental ideas as that of fate. They evidently want some stepping-stone, some intermediate link, by means of which they can reach it. Upon reconsidering the subject I have come to the conclusion that *vintana* is an obsolete collateral form of *kintana*, a star. My reasons are:

1. That the Malagasy *kintana* is in Malay *bintan*. This *bintan* should in Malagasy become *vintan* (in Kawi it is *wintan*), as an initial *b* in Malay is generally *v* in Malagasy (e.g. *vato*, *batu*; *volo*, *bulu*; *vblana*, *bulan*).
2. It is more natural that *star* than *time* (*evan*, *evinat*) should be used, as the *vintana* really depended on the stars in question, and had reference to time only so far as the fitness or unfitness of the time depended on the stars that governed it.

That affected style (unnecessary accumulation of old and rare words and phrases) makes it unpleasant reading; but it gives many particulars which I could not touch upon here, and conveys good idea of the great power of *vintana* over the people.

\* I am sure I am only expressing the feelings of many readers of the ANNUAL when I say that we hope that Mr. Dahle, having now arrived in Norway, will still give us the results of his further investigations on these interesting subjects.—ED. (J.S.)

3. In Arabic the word for star (*najm*) is used very much in the same sense as the Malagasy *vintana* (*pro finita rei ratio*); and the corresponding verbal root (*najama*) means to divine, to foretell by the stars (*ex astris prædixit, præagit, divinavit*), and a derivative of it (*najâmat*) means astrology. It is therefore very likely that the Arabs found no better Malagasy word for the idea they wished convey than the word for star (*vintana*).

It may, upon this theory, seems a little strange at first sight that the Malagasy word for star is now *kintana*, and not *vintana*. Perhaps both were in use as synonyms at the time; but as the one (*vintana*) was chosen as the technical term in astrology, the other became gradually the exclusive name of stars in the colloquial (cf. Mars and March in English). The root of both is probably *ntan* (cf. the forms *nlen*, *tein*, etc., in some of the cognate languages). *Ki* is a prefix in Malagasy.

VIII.—SAN-ANDRO. It is difficult to translate this expression without a periphrasis. It means the peculiarities or character of the days of the week as depending on the Seven Planets, considered as governors of these days. The Arabic word *sa'a* means a short space of time, and then, more widely, an hour. But it also occurs in the sense of 'day,' especially when some great and momentous day or time is spoken of (e.g. *as-sa'a*, the day [lit. 'hour'], i.e. the Day of Judgment). It seems to be taken in this wider sense here.

I shall now give the seven days of the week, with their respective *san-andro* and special number and character, in their order in the week:—

Name	San-andro	Number	Character
1 Sunday (Alahady*)	Samosy	1	good (Sun)
2 Monday (Alatsinainy)	Alakamary	5	bad (Moon)
3 Tuesday (Talâta)	Mariky	2	good (Mars)
4 Wednesday (Alarobia)	Motarita	6	good (Mercury)
5 Thursday (Alakamisy)	Mosataro	3 (2 ?)	bad (Jupiter)
6 Friday (Zomâ)	Zohara	7	bad (Venus)
7 Saturday (Asabôtsy)	Johady	4	middling (Saturn)

In the preceding list I have simply reproduced what I have got from my native helper, only adding in parentheses the identifications with the planets, of which he of course had no idea.

The writer in the *Folk-Lore and Folk-Tales*, whom I have quoted in a note under 'Vintana,' also mentions the *san-andro*, but under the name of '*fâminaniana amin' andro*' (i.e. 'prediction with regard to [?] days'); but he has no knowledge of its connection with the planets; and of the remarks he adds to each name I can make nothing. Their characteristic numbers he does not seem to know at all, and therefore he is also ignorant of the practical part of *san-andro*, which to a great extent depends on these numbers. Flacourt mentions the *san-andro* in use in the part of the country where he lived (Fort Dauphin) two centuries ago, and he also speaks of its connection with the planets, but there is a remarkable confusion in his translations and identifications.

Flacourt's list is as follows:—

		for comparison with my list.	
1 <i>Samoutsî</i> , the Sun	(Sunday)	= <i>Samosy</i>	(No. 1)
2 <i>Azohora</i> , the Moon	(Monday)	= <i>Zohara</i>	(,, 6)

\* As to the Arabic derivation of the Malagasy day-names and month-names, see my article in ANNUAL II. p. 77-80.

3 <i>Alotarida</i> , Mars	(Tuesday)	=	<i>Motarita</i>	(No. 4)
4 <i>Alakamari</i> , Mercury	(Wednesday)	=	<i>Alakamary</i>	{ „ 2 }
5 <i>Azoali</i> , Jupiter	(Thursday)	=	<i>Fohady</i> (Az- zoady)	{ „ 7 }
6 <i>Alimousetsari</i> , Venus	(Friday)	=	<i>Mosataro</i>	{ „ 5 }
7 <i>Alimarehe</i> , Saturn	(Saturday)	=	<i>Mariky</i>	{ „ 3 }

The names are all the same as in the list I got from my native helper, although somewhat differently written. This is, however, mostly owing to his having kept the Arabic article (*al*) throughout, except in *Samoutsi*; whereas my native helper has left it out. In some instances Flacourt's form seems to be the more correct one (e.g. *Al-otarida*, cf. my identifications). But the curious thing is, that, with a single exception (*Samoutsi*), he has managed to apply the names to the wrong planets all through! In order to show this clearly, I have added the names of my list, with their order in brackets. The same order is also followed in the list given by a native of Imèrina in his article on *vintana* quoted above (*Folk-Lore and Folk-Tales of Madagascar*, p. 283), only that he begins with Wednesday; but he applies the same name to the same day as in my list throughout. My list is that of the diviners at Ambàtofinandráhana. As the order both natives follow is the same, although they are from widely distant provinces, this may be taken as the received order among the diviners of the interior. And as it agrees exactly with the order of the planets in their relation to the days of the week (although these natives have no idea of this, and consequently cannot be suspected of having modified the order purposely, so as to make it agree with the planets), it follows that theirs must be considered the right and original one.

I wonder whether Flacourt's order is simply a blunder of his, or whether such a confusion had really taken place among the diviners at Fort Dauphin where he lived. In the latter case the diviners of the interior cannot have got their knowledge from the south-east coast, but must have acquired it from a more direct and original source, perhaps from the west coast by way of Mènabè. I wonder what system they follow there.

Flacourt states that at Fort Dauphin they also divided the day into seven parts and the night into seven also, and made the seven planets preside over these divisions. This was not the custom in the interior. Here they divided night and day into twelve equal parts, which took their names from the four corner-months (*Alàhamàdy*, *Asòrotány*, *Adimizàna*, and *Adijàdy*), three from each of them (*vàva*, *vénto*, *fàra*).

When my native helper brought me the list I have given above, at a time before I had had an opportunity of examining Flacourt's remarks, I saw at a glance that the first and second name was that of the sun and the moon; and this made me conclude that the remaining five would prove to be the five older planets, which, upon examination, was also found to be the case. The following are the identifications of them:—

- 1 *Samosy* = Ar. *Shams* (Heb. *shemesh*), the Sun.
- 2 *Alakamary* = „ *Al-gamar*, the Moon.
- 3 *Mariky* = „ *Murrik*, Mars. The Arabic word *Marrik* seems originally to have meant a kind of arrow; then Mars, as the god of war, whose symbol was the arrow.
- 4 *Motarita*. In my Arabic Lexicon I find only the form *utarit* (cf. Flacourt, *Alotarida*) for Mercury; but as *motarat* would be only another form of the same root, there can be no doubt as to the identification. The verbal root means 'to be fragrant,' or to deal in perfumes. A derivative, *atàrid*, means 'a seller of perfumes,' and then a merchant. This reminds one of the Mercury of the Romans, who was especially the god of traders.

- 5 *Mosataro*=Ar. *Mushtari*, Jupiter. Root meaning of the verb, 'to be greedy or greatly desirous of anything;' hence to buy; probably *mush-tari* means the purchaser or acquirer.
- 6 *Zohara*=Ar. *Zahro*, Venus. Root meaning, 'the brilliant one;' sometimes also used as a name of the Moon.
- 7 *Johady*=Ar. *Zahal*, Saturn. The root meaning seems to be, 'one who recedes,' gives up his place to another. Saturn had to give up his to Jupiter.

Any one who has the slightest knowledge of Latin will immediately have noticed that what were in Malagasy the extraordinary day-names only in *san-andro*, were in Latin the ordinary day-names (*Dies Solis*, *Lunæ*, *Martis*, *Mercurii*, *Jovis*, *Veneris*, *Saturnii*). Even in French the same names have been kept throughout, with the exception of Sunday, *Dimanche*=*Dies dominica*, although greatly altered. The English has kept one of them in a corrupted form (Saturday), has translated two (Sunday and Monday), and has borrowed the rest from the corresponding Teutonic god-names (*Tius*=Mars; *Wedn* [=Wodan or Odin]=Mercury; *Thor*=Jupiter; and *Frey*=Venus). In Germany and the Scandinavian countries they have only translated two of them (Sunday and Monday).

The explanation of this rather curious fact no doubt is that the astrology of Babylonia (and Egypt?) has spread itself both to Arabia, and from thence to Madagascar, and to Europe; and, that according to this astrology, the planets in question, and the gods identified with them, held the sway over the days of the week; and it depended on the supposed nature of each planet whether the day under its sway should be considered a lucky or an unlucky one. From passing notices in the ancient classics we know that the Babylonian astrologers and their Greek pupils even had tables of the lucky and unlucky stars, with rules regarding their influence on human destiny; but as these are lost there is perhaps little hope of ever getting to the actual source of these theories. We have now scarcely any means of finding out *why* some planets were considered more lucky than others; we only know that this notion *was* the origin of the other one, that of lucky and unlucky days; a notion which has up to quite recent times (even up to the present day in some places) been tenaciously held by the common people even in the different countries of Europe.

In my list above, a certain *number* has been given as characteristic of each planet. It will be seen that these numbers are those from 1 to 7, corresponding to the seven planets, but in a different order from that followed in the list. To *Mosataro* my native helper had written the number 2, just as in *Mariky*, but I think that is only a blunder. These numbers are of great importance in the practical part of the *san-andro*, to which I shall now proceed.

1.—*Ny San-andron' ny Mâtý* (The *San-andro* of the Dead or the *direct San-andro*).

This refers, as far as I can see, exclusively to *burials*. If a corpse was to be buried, this could be done on any day; but it had to be done with due regard to the *san-andro* of the burial day; although I suppose they would generally prefer a day considered as 'good' (Sunday, Tuesday and Wednesday). The proceedings depended entirely on the *number* charac-

teristic of the *san-andro* of the day of burial. If, for instance, it was on Wednesday, the special number of which is 6, they had to stop six times with the bier on the way to the grave, throw down a stone at each stopping-place, and carry the corpse six times round the grave before they buried it. If the burial was to take place on a Saturday, the same thing would be done only four times; if on Friday, seven times, and so on, according to the characteristic number of the *san-andro* of the day.

Why the different planets got these numbers respectively, I am unable to tell. As the Sun has No. 1, it occurred to me at first that the various heavenly bodies were probably numbered according to their supposed distance from the earth; but this cannot be the case. They may have supposed the brightest (the Sun) to have been nearest, and the next brightest (the Moon) to come next; but then we should certainly have expected Venus to follow, and not Mars and Mercury, which are not nearly so bright. It is strange too, that Mars and Mercury should be considered lucky, and the bright Moon, Venus, and Jupiter unlucky. From the little we know of the astrology of the ancients, we gather that the three last ones were considered lucky, Saturn and Mars unlucky, and Mercury neutral.

2.—*Ny San-andron' ny Velona, na Sa-mivèrina* (The *San-andro* of the Living, or the *San-andro* which was counted 'backwards').

The description of it given by my native helper is not very clear, but so far as I can make out, this *san-andro* had reference only to sacrifices (*sòrona*). When a *sòrona* was brought, prayers were to be offered up too, and in these prayers and invocations the priest used to expatiate on the corresponding *san-andro*; but in so doing he did not refer to the *san-andro* of the day of the offering, but always to that of 'the day before yesterday;' in other words, he always counted two days *backwards* to find the *san-andro* he wanted. If, for instance, Sunday was the day of offering, the *san-andro* of the preceding Friday was the one he referred to, and so on.

It does not fall within the scope of this article to give the *prayers* which the priests used on such occasions; but this one is so peculiar that I must briefly refer to it. The priest on this occasion used to call on God as '*Andriamànitra fito miànaka*' ('God as a family of seven') and as '*vdlo mivady*' ('eight pairs,' i.e. eight husbands and eight wives?)\*. He also calls on God as *Ratomárajiba*, *Ratomáraféfy*, *Rabodisy* and *Rakénónkénona*. All this is peculiar; the last word is Malagasy and seems to mean 'the loquacious one.' The three preceding ones seem to be foreign words, at least partly so; *tomara*, *bodisy*, and *jibo* seem to be Arabic, but I cannot identify them at present. The 'seven' probably had a reference to the seven planets as God's manifestation.

Offerings could only be brought on the three 'good days,' Sunday, Tuesday and Wednesday; but *sikidy* could be performed on any day. The reason probably was, that *sikidy* belonged to the necessities of life, which could never be allowed to be stopped.

3.—*The Character of the Seven Days of the Week in relation to Evils and the Foretelling of Evils.*

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\* Both expressions are ambiguous. *Fito mianaka* may mean parents with five children, or a father, or mother, with six children. *Valo mivady* most naturally means eight pairs, but it might also mean only four pairs (eight married persons), or even a man with seven wives!



My native professor gives the following rules, which I reproduce on his authority:—

1. *Alahady* was the proper day for everything white: white-haired people (*fôtsy vôle*), white stones, etc.
2. *Alatsinainy* was the day for everything green and blackish: grass, forests, greenish birds, people with blackish skin, etc.
3. *Talata*: the day of people who have many scars (cicatrices), and are also pock-marked from the small-pox (*sôki-nendra*).
4. *Alarobia*: the day of women and everything female.
5. *Alakamisy*: the day of slaves.
6. *Zoma*: the day of nobles and everything which is red (red or scarlet clothes, etc., characteristic of the higher nobility).
7. *Asabotsy*: the day of the young people and everything young.

If a man suffering from or apprehensive of some evil came to a *mpisikidy* or other foreteller of future events, he would be sure to be asked some question with special reference to the character of the day on which he came. If he, for instance, came on a Sunday (*Alahady*), it would be intimated that his complaint had been caused by some obnoxious white stone; or by drinking milk (which of course is white), in which there were some ghosts; or that he had been bewitched by some old white-haired woman; or, at any rate, that he was in danger of some such mishap, and had better look out carefully. If on Thursday (*Alakamisy*), his griefs were almost sure to be attributed to some slave, or he was warned to beware of his slaves, lest they should murder or bewitch him.

And so on for the other days, according to the nature of the day.

4.—*Foretelling of the Tâsik' andro*, (i.e. the day on which one may be in special danger of getting ill through the influence of the *vintana*).

This was a peculiar compound of *vintana* and *sikidy*, subjected to the following rules:—

To find the day, you begin from Tuesday (*Talata*), and work *the sikidy* on the following principles:—

1. *Trano* and *Lâlana* form (point to) *Talata* (Tuesday).
2. *Lâlana* and *Mpanontany* form *Alarobia* (Wednesday).
3. *Mpanontany* and *Asorotany* form *Alakamisy* (Thursday).
4. *Asorotany* and *Andriamanitra* form *Zomà* (Friday).
5. *Andriamanitra* and *Nia* form *Asabotsy* (Saturday).
6. *Nia* and *Masina* form *Alahady* (Sunday).
7. *Masina* and *Fâhasiv* form *Alatsinainy* (Monday).

That is to say, if a combination of the two rubrics *Trano* and *Lâlana* in the *sikidy* you have erected gives you a figure which is like *Talé* (which represents the man in question), the man is in danger of being taken ill on Tuesday. The procedure is the same with the other days.

The dangerous day being found out, the *mpisikidy* takes a piece of *Anàndrofôtsy* (an herb), puts it into a bottle (*tavôdra*), pours water on it till it is brimful, puts a cane (*Bàraràta*) into it, by which of course some water must overflow; and this he takes and rubs or brushes it seven times on the man from head to foot, saying, "His day is conquered by him, his *vintana* is conquered (overcome, 'lony') by him, and does not overcome him. His day and his *vintana* shall not govern him ('*milon-dra azy*'), but he shall govern them."

As this and the preceding section is neither called *vintana* or *san-andro*, although it is in reality only a peculiar form of the last, and as *san-andro* is itself only a form of *vintana* (planetary *vintana*, I ought rather to have called the whole of this chapter *Vintana*, and subdivided it into 'Zodiacal and Lunary Vintana,' and 'Planetary Vintana.' To the first would belong everything depending on the Zodiac and the Moon-stations and which is connected with the month-days; to the second all that depends on the seven planets and is closely connected with the week.

The question occurred to me: What is to be done, if a day is a lucky one as to its place in the *month*, but unlucky according to its position in the *week*? But as the first class chiefly referred to birth and business, the second to burial, offerings and diseases, I suppose these sly diviners managed to avoid a *collisio officiorum*.

There are many other points in *sikidy* and *vintana* which I have been obliged to pass over in silence, or only slightly touch upon. But it is time that I should bring this article to a close.

The *sikidy* and *vintana* was once the most tremendous power in this island: let us thank God that its spell is broken, and its influence passing away.

L. DAHLE.

NOTE.—Let me take this opportunity of correcting an error in the first of these papers (ANNUAL X., 1886, p. 228) I expressed some doubt as to the phrase *mamo-hefa*. A native has pointed out to me that it certainly should be *mamoha ifa*, 'to revive again a past (evil),' e.g. a disease.—L.D.



## THE VOLCANIC LAKE OF TRITRIVA:

### ITS PHYSICAL FEATURES AND LEGENDARY HISTORY.

THE great island of Madagascar is not at present one of those regions of the earth where volcanic disturbances occur; but there is ample evidence from the numerous extinct craters found in various parts of the island that at a very recent period, geologically considered—possibly even within the occupation of the country by its present inhabitants—it was the theatre of very extensive outbursts of subterranean energy. The whole island has not yet been examined with sufficient minuteness to determine the exact extent of these old volcanoes, but they have been observed from near the south-east coast in S. Lat. 23°, and in various parts of the centre of the island up to the north-west and extreme north, a distance of 680 miles; and probably a more careful survey would reveal other links connecting more closely what is, as at present known, only a series of isolated groups of extinct craters. In the central provinces of Madagascar there are two large clusters of old volcanic cones and vents: one of them in about the same latitude as the Capital (19° S.), but from 50 to 70 miles away to the west of it, in the neighbourhood of Lake Itasy;

the other in the district called Vakinankaratra, situated about 80 miles to the south-south-west of Antananarivo, and south-west of the great central mountain mass of Ankàratra.

This second volcanic region stretches from 20 to 30 miles from Antsirabè away west to Bètàfo and beyond it, and contains numerous and prominent extinct craters, such as Ivòko, Iatsifitra, Vòhitra, Tritriva, and many others, some of which have been described by the graphic pen of the late Dr. Mullens in his *Twelve Months in Madagascar* (pp. 214-219). The doctor says that he counted in this southern group about 60 cones and craters.\*

There are also many hot springs in this Vakinankaratra region, the most noted of which are those at Antsirabè. At this place one of the chief springs is largely charged with lime, which has formed an extensive deposit all over a small level valley sunk some 20 feet below the general surface of the plain around the village. For a long time past this place has furnished almost all the lime used for building in the Capital and the central province of Imèrina. Besides the deposit over the floor of the valley, there is also a compact ridge shaped mass of lime accretion, 70 feet long by 18 to 20 feet wide, and about 15 or 16 feet high. This has all been deposited by the spring, which kept a passage through the lime to the top. Within the last eight or ten years, however, the spring has been tapped by a shaft of no great depth a few yards to the north, over which a large and commodious bath-house has been erected by the Norwegian Lutheran Mission; and here many visitors come to bathe in the hot mineral water, which has been found very beneficial in rheumatic and other complaints. A little distance to the south-west is another spring, not however hot, but only milk-warm, the water of which is drunk by those who bathe in the other spring. This water has been shown to be, in chemical constituents, almost identical with the famous Vichy water of France.† All over the valley the water oozes up in various places; and about half a mile further north are several other springs, somewhat hotter than that just described, to which the natives largely resort for curative bathing.

During the excavations for the foundations of the bath-house, the skeletons of several examples of an extinct species of Hippopotamus were discovered, the crania and tusks being in very perfect preservation. Some of these are now in the Museum at Berlin; but the finest specimen was sent to the Museum of the University of Christiania in Norway. This Madagascar Hippopotamus was a smaller species than that now living in Africa, and is probably nearly allied to, if not identical with, another Hippopotamus (*H. Lemerlei*), of which remains were found in 1868 by M. Grandidier in the plains of the south-west coast (see p. 438, *ante*). I was informed by the people that wherever in these valleys the black mud is dug into for a depth of three or four feet, bones are sure to be met with. Probably a series of excavations would reveal the remains of many animals, birds and reptiles formerly inhabiting Madagascar. From the internal structure of the teeth and bones of the Hippopotami discovered at Antsirabè, traces of the gelatine being still visible, it is evident that the animals had been living at a comparatively recent period. There have been occasional

\* See ANNUAL IX., pp. 66-74.

† *Ibid.*, p. 74, for analysis of water.

vague reports of the existence of some large animal in the southern parts of the island; possibly the Hippopotamus is not yet absolutely extinct there; and perhaps the half-mythical stories of the *Songòmbi*, *Tòkandia*, *Làlomèna* and other strange creatures current among the Malagasy are traditions of the period when these huge pachyderms were still to be seen in the lakes and streams and marshes of Madagascar.

Within a few miles of Antsirabe are two crater-lakes. The nearer and larger of these is called Andraikiba, which lies distant about four miles due west. This is a beautiful sheet of water, blue as the heavens in colour, in shape an irregular square, but curving round to the north-west, where it shallows into a marsh, which is finally absorbed in rice-fields. The lake is said to be of profound depth, but the hills surrounding it are not very lofty, rising only about 200 feet above the surface of the water, from which they ascend steeply. Fish and water-fowl and crocodiles also are said to be very abundant in and on its waters.

But the most interesting natural curiosity to be seen in the neighbourhood of Antsirabe is the crater-lake of Tritriva. This is situated about ten miles to the south-west, a pleasant ride of two hours by palanquin. Travelling at first in a westerly direction, the road then turns more to the south-west, and skirts the southern foot of the old volcano of Vohitra (already mentioned). Passing about a mile or so south of the high ground round the southern shores of the Andraikiba lake, the road gradually ascends to a higher level of country, so that in about an hour and a half's time we are nearly as high as the top of Vohitra—probably about 500 feet. Reaching a ridge between two prominent hills, we catch our first sight of Tritriva, now from two to three miles distant in front of us. From this point it shows very distinctly as an oval-shaped hill, its longest axis lying north and south, and with a great depression in its centre; the north-eastern edge of the crater wall being the lowest part of it, from which point it gradually rises southwards and westwards, the western edge being at the centre from two to three times the height of the eastern side. To the north are two much smaller cup-like hills, looking as if the volcanic forces, after the main crater had been formed, had become weaker and so been unable to discharge any longer by the old vent, and had therefore formed two newer outlets at a lower level.

Descending a little from the ridge just mentioned, we cross a valley with a good many scattered hamlets, and in less than half an hour reach the foot of the hill. A few minutes' pull up a tolerably easy slope, perhaps 200 feet in height, brings us to the top, at the lowest part of the crater edge; and on reaching the ridge the crater of the old volcano and its lake is before us, or, rather, below us. It is certainly an extraordinary scene, and unique of its kind. The inner sides of the crater dip down very steeply on all sides to a deep gulf, and here, sharply defined by perpendicular cliffs all round it, except just at the southern point, is a rather weird-looking dark-green lake far below us, the water surface being probably from 200 to 300 feet lower than the point we are standing upon, and consequently below the level of the surrounding country. The lake, exactly shut in by the cliffs of the crater surrounding it, is not blue in colour, like Andraikiba, although under a bright and cloudless sky, but a deep and somewhat blackish green. It must look, one would suppose, like ink under a stormy sky or in the shadows of evening.

We sit down to rest and try to take in all the details of this novel picture. It is undoubtedly an old volcano we are now looking down into; the spot on which we rest is only a few feet in breadth, and we can see that this narrow knife-edge is the same all round the crater. Outside of it the slope is pretty easy, but inside it descends steeply, here and there precipitously, to the edge of the cliffs which so sharply define the actual vent and, as distinctly, the lake which they enclose. Looking southwards, the crater edge gradually ascends, winding round the southern side, and still ascending as the eye follows it to the western, the opposite, side, where the crater wall towers steeply up from two to three hundred feet higher than it rises on the east, where we are sitting. The lake we judge to be about 800 to 900 feet long and 200 to 250 feet wide, forming a long oval, with pointed ends. The cliffs which enclose it appear to be from 40 to 50 feet in height, whitish in colour, but with black streaks where the rain, charged with carbonic acid, has poured more plentifully down their faces. These cliffs are vertical and in some places overhang the water, and from their apparently horizontal stratification are no doubt of gneiss rock. In coming up the hill I noticed a few small lumps of gneiss among the basaltic lava pebbles. The strangest feature of this Tritriva is the sharply defined vertical opening of the vent, looking as if the rocks had been cut *clean through* with a Titanic chisel, and as if they must dip down—as is doubtless the case—to unknown depths below the dusky green waters. At the northern end of the lake is a deep gorge or cleft, partly filled with bushes and other vegetation. Southward of this, on the eastern side, the cliffs are still lofty and overhang the water, but at about a third of the lake's length they gradually decrease in height, and at the southern point they dip down to the level of the lake, so that at that part only can the water be approached. On the western side the cliffs keep a pretty uniform height along the whole length.

So steep is the inward slope of the crater walls, that we all experienced a somewhat 'eerie' feeling in walking along the footpath on its edge, for at a very few feet from this a false step would set one rolling downwards, with nothing to break the descent to the edge of the cliffs and then to the dark waters below. Yet there was a strange fascination in the scene, and the variety and contrast and depth of the colours would make the Tritriva lake and slopes a striking subject for a painting from many different points along its crater wall. When we arrived, the sun, yet wanting an hour and a half of noon, was still lighting up the grey-white stone of the western cliffs; but the shadows were every minute growing more intense, as the sun became more nearly vertical. Far below us was the deep-green oval lake; around it, the stratified gneiss cliffs with their black streaks, diversified here and there by patches of bright-green bush; then again, from their edges swept steeply upwards the grey-green sides of the crater, culminating in the lofty western ridge opposite to us; and over all was the blue sky flecked with cirrus clouds—together a scene such as I have seen nowhere else in Madagascar, or indeed in any other country.

After fixing in our minds the view from the north-east, we proceeded southwards along the crater edge to the higher part at the south-east, where the view was equally striking, and the depth of the great chasm

seemed still more profound. Here we waited some time, while most of our men went down to one of the hamlets in the plain to the east to seek their meal, in which quest, however, they had only poor success. On expressing a wish to taste the Tritriva water, one of our bearers took a glass, and descending by a break-neck path, went to fetch some water from the lake. He was so long away that we were beginning to feel uneasy; but after a quarter of an hour he reappeared with the water, which tasted perfectly sweet and good. He also entertained us with some of the legends which were certain to have grown up about so weird looking a place as Tritriva. Pointing to two or three small trees or bushes growing on the face of the cliffs near the northern point of the lake, he told us that these were really a young lad and lass who had become attached to each other; but the hard-hearted parents of the girl disapproving of the match, the youth took his loin-cloth, and, binding it round his sweetheart and his own body, precipitated her with himself into the dark waters. They became, so it is said, two trees growing side by side, and they now have offspring, for a young tree is growing near them; and in proof of the truth of this story, he said that if you pinch or break the branches of these trees, it is not sap which exudes, but blood! He appeared to believe firmly in the truth of this story.

He also told us that the people of a clan called Zânatsâra, who live in the neighbourhood, claim some special rights in the Tritriva lake; and when any one of their number is ill, they send to see if the usually clear dark green of the water is becoming brown and turbid. If this is the case, they believe it to be a presage of death to the sick person.

Another legend makes the lake the former home of one of the mythical monsters of Malagasy folk-lore, the *Fanânim-pîto-lôha* or 'Seven-headed Serpent.' But for some reason or other he grew tired of his residence, and shifted his quarters to the more spacious and brighter lodgings for seven-headed creatures afforded by the other volcanic lake of Andraikiba.

This same bearer assured us that in the rainy season—contrary to what one would have supposed—the water of the lake diminishes, but increases again in the dry season. He told us that there is an outlet to the water, which forms a spring to the north of the mountain. I noticed a white line a foot or two above the surface of the water all round the foot of the cliffs, showing a probably higher level than at the time of our visit. The lake is doubtless profoundly deep. I was told that a few years ago Mr. Parrett sounded it with a line 600 feet long, but found no bottom at that depth.

Walking round to the southern end of the crater edge, the lake, herereshortened, has a somewhat close resemblance in outline to that of the Lake of Galilee, as seen on maps; but I must confess that the first sight of it in its deep chasm made me think much more of the other lake of Palestine, the Dead Sea, in its profound gorge between the Judean hills and the highlands of Moab. After making a slight pencil sketch or two, I proceeded up the far higher saddle-back ridge on the western side. Here the lake seems much diminished in size and lying far down at an awful depth. But a magnificent and extensive view is gained of the surrounding country: the long flat-topped lines of hill to the east running many miles north and south, and surmounted directly east by two

perfect cones (old volcanoes, Vótovóróna and Ihankfana); the peaked and jagged range of Vólombóróna to the south-east; the enormous mass of Ibity to the south, and then west, a flat region broken by abrupt hills; to the north-west are the thickly populated valleys towards Betafo, with many a cup-shaped hill and mountain marking old volcanic vents; and beyond this a high mass of country, with serrated outline against the sky, showing the district of Vávavato and the peaks of Iávohaika; and finally, coming to due north, is the varied grouping of the hills which form the southern termination of the central mountain mass of Ankaratra. Between us and these again is the extensive plain of Antsirabe, with the white walls and gables of the church and the mission buildings plainly visible in the bright sunshine, although ten or twelve miles distant—altogether, a panorama long to be remembered. From this point also the significance and appropriateness of the name given to the old volcano is clearly seen: for Tritriva is apparently a combination of the words *trity*, a word used to describe the ridge on the back of a chameleon or a fish, and *tva*, low, deep; so that the name very happily describes the long steep western ridge or crater wall, and the deep chasm sweeping down from it.

It may just be said in conclusion, that the slopes of the crater both inside and out are covered with turf, which grows on a dark-brown volcanic soil, mingled with rounded pebbles of greenish or purple lava, very compact and close in structure, and containing minute crystals scattered sparingly through it. Occasional blocks of this are found round the edge of the crater wall, and the same rock crops out at many places on the steep inner slopes. I did not notice any vesicular lava or scoria; and at a little homestead not far from the north-eastern foot of Tritriva, I was surprised to find the *hady* or fosse dug to twelve or fourteen feet deep almost entirely through the red clay or earth found all through the central regions of the island. The dark-brown volcanic soil, here seen in section, appeared to be only about eighteen inches deep, with layers of small pebbles. So that the discharge of the volcanic dust and ash appears to have extended only a short distance from the mountain, at least it does not appear to have been very deep, unless indeed there has been much denudation. It must be remembered, however, that this point is to the windward side of the hill; probably the volcanic soil is deeper to the west of it. The much greater height of the western wall of the crater is no doubt due to the prevailing easterly winds carrying the bulk of the ejected matter to the west, and piling it up to two or three times the height of the eastern side. After seeing the amount of gneiss rock which must have been blown out of the vent, I expected to have found much greater quantities of it, and in larger blocks, than the very few and small fragments actually seen on the outer slopes. The greater portion, however, is probably covered up under the quantities of volcanic dust and *lapilli* which were subsequently ejected.

Tritriva, it will be evident from this slight sketch, will greatly interest those who have a taste for geology and physical geography; while its peculiar and somewhat awe-striking beauty makes it equally worthy of a visit from the artist and the lover of the picturesque. Certainly it has become photographed upon our memory with a distinctness which will render it a vivid mental picture for many a day to come.

JAMES SIBREE, JUN. (ED.)

## GENERAL HALL, AND THE EXPORT SLAVE-TRADE FROM MADAGASCAR:

### A STATEMENT AND A VINDICATION.

IN Ellis's standard *History of Madagascar* it is stated:—"The conduct of General Hall brought lasting disgrace on the British name, and added another to the melancholy catalogue of events illustrative of the calamitous results of even temporary power in the hands of weak or wicked men. It is but due to the British Government to state that the conduct of the acting-Governor was severely condemned" (vol. ii. p. 217).

For half a century the memory of Major-general Hall has suffered under the shade cast by the above-mentioned notice, which conveys a stigma altogether unmerited; and it is time that some reparation should be dealt out to the gallant officer whose fault consisted (if indeed it was not a merit) solely in too rashly opposing public opinion in Mauritius at a time when much tact was required while combating the aspirations of a slave-dealing community.

In writing my "Historical Sketch of Madagascar" I was thoroughly misled by Ellis's version of the occurrences which led to the undeserved judgment of General Hall recorded in his pages, and I unwittingly repeated the libel,\* for it is nothing less, and therefore it is incumbent on me to take the earliest opportunity of rehabilitating General Hall's character. This cannot be done, unfortunately, without discrediting, in some degree, the purity of Governor Sir R. Farquhar's administration; but the reputation of Sir Robert stands so high that it can well afford a slight depreciation in the interests of justice to his subordinate colleague so long maligned.

At the end of 1828 a series of documents upon the subject of slavery in Mauritius was presented to Parliament; but Blue-books are seldom studied by the public, and it is solely owing to the comments made in the *Anti-Slavery Reporter* that these records have not remained in oblivion. These papers are not calculated to exalt one's opinion of the favourable disposition of the local government towards the Malagasy and negro slaves who were employed on the sugar plantations of Mauritius. The first return gives the number of government slaves at Mauritius in 1813, when Sir Robert Farquhar was governor, as 1638, and in 1827 as 1342, showing a decrease of 296. The second return gives the laws in force at Mauritius regulating the punishment of slaves by their masters. This comprises the edict from the code of the Isle of France dated 1723, containing a few merciful regulations for the slaves, such as authorizing the Procureur-general to prosecute complaints by slaves against their masters who do not feed, clothe and support them, etc., etc.; and enjoining all holders of slaves to govern them "*en bons pères de famille*."

But the major part of the regulations are for the security and benefit of the master. Slaves are forbidden, if belonging to different masters, to assemble together, by day or night, on any pretence, under pain of flogging, branding and, if repeated, death. Slaves can hold no property whatever, nor be witnesses in civil or criminal matters, unless in the absence of whites, but in no case, either for or against their master; and they cannot prosecute, though they may be prosecuted. A slave who strikes master, mistress or their children, producing contusion or effusion of blood, or on the face, is punishable capitally. And so on. These regulations were confirmed in 1767, when

\* "Meantime \*\*\* the acting-Governor, Major-general Hall, not only undid as far as lay in his power the beneficent acts of Mr. Farquhar, but refused even to carry out the treaty concluded with Radama, who thereupon permitted the slave-trade to recommence."—Capt. Oliver's *Madagascar*, vol. i. p. 32.



masters were also forbidden to inflict more than 30 lashes without the sanction of the police.

Such was the slave law in the colony of Mauritius in 1810, and such it remained during the whole of Sir Robert Farquhar's administration; and no modification of it took place until December 1826, when ordinances were promulgated by Sir G. Lowry Cole, enjoining the strict observance of the limitation of flogging to 30 lashes, and *recommending* the planters to relinquish the practice of flogging females. Sir R. Farquhar governed Mauritius, therefore, many years without introducing one solitary regulation for the protection of the slaves, while persons composing his household were deeply interested in upholding the very worst evils of slavery. The Governor told Lord Liverpool indeed, soon after his arrival, that the slaves in Mauritius had been decreasing during the preceding seven years; and he made use of this fact to convince his lordship of the necessity of continuing to import slaves, saying in 1812, that "without the slave-trade or some other substitute these colonies" (Mauritius and Bourbon) "promise to be shortly annihilated." Again, he wrote in September 1812,—"I have done all in my power to alleviate the oppression of the slaves. *The laws are strongly in their favour*" (!) [what they were has been already shown], "but with courts of justice constituted as those at present in these colonies are, it is difficult to obtain justice."

In the year 1809 the slave population, according to Sir R. Farquhar, amounted to 60,000. In the year 1815, when, according to the decreasing ratio stated by the Governor, the number of slaves must have been reduced to 44,000, a census gave the number as 87,352. Now it is totally impossible to reconcile this fact with the statement gravely recorded by the Governor; for either 43,000 slaves must have been imported into the colony in contravention of the slave laws, or the numbers and the decrease of the slave population, stated so short a time previously as an urgent and unanswerable argument for tolerating slave importation, must have been false. Examples are given of the easy way in which the laws against slave-trading were evaded during Sir R. Farquhar's administration.

At the close of the year 1816 a mission was sent by Governor Farquhar to Antananarivo, conducted by his personal aide-de-camp Captain Le Sage. "It would have been impolitic," writes Ellis, "to have developed, at this early stage of the proceeding, the great design of endeavouring to effect the abolition of the slave-trade, as many powerful and influential parties had at that time an interest in maintaining the traffic; such individuals being but too likely to sacrifice humanity at the shrine of Mammon, and thus to render abortive a scheme which they knew must, if effected, deprive them of their accustomed gains."—*Ellis*, vol. ii. p. 156.

The effect of this mission was stated by Governor Farquhar's secretary, Mr. Blanc, as follows:—"His Excellency has ascertained that the slave smugglers have met with great difficulties this season (June 26, 1817) in procuring slaves. His Excellency attributes this happy result, which has already been obtained from opening a communication and contracting an alliance with the most powerful of the Madagascar states, to the representations made to Radama last year through the medium of his aide-de-camp Captain Le Sage." It subsequently transpires that Captain Le Sage accepted *ten* slaves as a present from King Radama while on this mission, and brought them to Mauritius, a fact which must have been known to Governor Farquhar.

When Mr. Hastie next proceeded to Antananarivo, upon the King noticing among the attendants of his guest a Mozambique, who was one of the slaves he had given to Captain Le Sage, the British Agent availed himself of the opportunity offered for acquainting the King that these people could not remain in Mauritius as slaves; that the British Government, actuated by principles of humanity and justice, could not permit their servants even to

\* Vide *Anti-Slavery Reporter*, Nov. 1828, and Jan. 1829.

accept slaves as presents. The King said he had given Captain Le Sage ten slaves, and asked, with his accustomed shrewdness, whether this law existed then. He was told that only four had arrived at Mauritius. "Where then," said Radama, "are the others?" "Four of them," replied Mr. Hastie, "are returned to this country, as you have already seen, and the remaining number never reached Mauritius." Upon this Radama questioned the slaves themselves, who proved beyond doubt that their companions were still held in slavery in Mauritius, having been sold, presumably by Captain Le Sage himself. Radama never forgot this difference between the acts and the words of the Governor of Mauritius; and to show how he appreciated the continuance of the slave-traffic with Mauritius, the King sent to the British Agent afterwards to say that he could do without selling slaves himself, but that his people, who supported him, would never be satisfied if deprived of the means of increasing their wealth. He therefore wished to know from Mr. Hastie, whether Governor Farquhar would allow of their proceeding personally to Mauritius for the purpose of selling off their stock of slaves during the ensuing five years.

In consequence of the publicity given to these scandals connected with the slave-trade at Mauritius, a variety of papers\* were laid before Parliament, chiefly with reference to the charges made against Sir Robert Farquhar. The document of most importance is the Report of the Commissioners, who were specially directed to inquire into the conduct of the colonial servants accused either of having been actually engaged in the slave-trade, or of having systematically connived at those proceedings on the part of others. The essential object of the inquiry was in fact "the vindication of the honour of the Government, in the conduct and proceedings of its servants." But the Commissioners, after acknowledging the facilities afforded by Sir G. Lowry Cole, the Governor, and the assistance they received from the heads of some of the public departments, add: "But with these advantages we are bound to state that the difficulties of the inquiry have been considerable from the general unpopularity attending it, and which have led to our obtaining by accident, at a late period, an acquaintance with facts which must have been generally notorious in the community."

On the part of the inhabitants, it was apparent that many individuals were deeply interested in evading the retrospect into their former proceedings; and they took advantage of their influence to awaken a general apprehension of the consequences of such an investigation, and the risk attending any admission of the extent to which the slave-trade had been carried on and encouraged. The consequence was that almost all the enquiries were fruitless, and and their object was defeated. "The sale of slaves at Port Louis," the Commissioners state, "was generally conducted by commission. The vessels appear to have been considerably crowded from the eagerness of the traders to increase the profits of their voyages." The practice prevailed at Port Louis of fitting out vessels for the slave-trade and concealing the names of the owners, so that if the vessel was captured, the real owner was not compromised; and the vessels approaching at night landed the negroes in pirogues or rafts. The slaves were then taken into the woods and concealed in caverns, whence they were conducted into town for sale. The registration system was defeated by the reluctance or refusal of owners to send returns of their slaves, and by mal-practices in the Registry Office itself, where one of the clerks was afterwards discovered to be the owner of a slaving vessel.

These transactions occurred mostly under the administration of Sir Robert Farquhar, who embarked for England in November 1817. At least culpable

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\* *Report of the Commissioners of Inquiry upon the Slave-trade at Mauritius. Copies of Correspondence between Sir Robert Farquhar and the Colonial Department, etc. Ordered to be printed by the House of Commons, June 1829.*

negligence, if nothing worse, must have been the reason why the laws against slave-trading were not enforced with more energy by that Governor.

When Sir R. Farquhar left the island, the government devolved upon Major-general Hall, the then commander of His Majesty's forces; and he, says the Report, appears to have been early impressed with a belief that proper measures had not been taken to put down the slave-trade; and that it had been systematically promoted by the inhabitants of Mauritius, who had a direct interest in augmenting the stock of their slaves; and his attention was directed to the object of discovering and punishing those who protected and encouraged it within the colony. The consequence of the firm and active measures taken by General Hall was, the seizure of a great number of negroes recently imported, and the consequent resentment of the legal authorities; hence the extreme unpopularity of the officer administering the government. The Treaty signed by Captain Stanfell of H.M.S. *Phaeton* and the British Agent at Tamatave with Radama's commissioners on the 23rd October 1817, stipulated that it was to take effect from the date of signature; and Mr. Hastie was appointed as British Agent by Governor Farquhar prior to his leaving Mauritius, and was to see that the conditions were duly observed by Radama. According to Ellis, "the first payment of the equivalent agreed upon in the treaty with Radama became due in May 1818, when Mr. Hastie, agreeably to his instructions, left the Capital for the coast, proposing to return from Mauritius with the various articles stipulated on in the agreement. While waiting a short time at Tamatave, a vessel arrived with several slave-dealers (Mauritians) on board and bearing the tidings, to them most agreeable, that the then acting-Governor of Mauritius, General Hall, had relinquished further intercourse with the chieftains of Madagascar; that he refused to pay the equivalent stipulated by Governor Farquhar and intended to recall the Agent stationed at the Capital. A letter from the Governor of Mauritius was at the same time presented with much formality to Mr. Hastie by a *deputation of the slave-dealers*, recalling him from Madagascar. "Mr. Hastie found on reaching Mauritius that these representations were but too true, and his worst fears were more than realized. His nation was dishonoured, and incalculable evil, for which he had no present remedy, was inflicted on the Malagasy."—*Ellis*, vol. ii., pp. 200, 201.

Now it must be borne in mind that Governor Farquhar was altogether responsible for the Treaty, and that he left Mauritius before it had been approved, much less ratified, by the British Home Government. Until Major-general Hall had heard from England that the conditions of this Treaty were sanctioned, it was obviously impossible for him to make a payment from the Colonial Treasury; and the withholding of the sanction of Lord Bathurst was the fault entirely of Governor Farquhar, then in England; so the insinuation in the above narrative that the so-called violation of the Treaty was the work of General Hall is altogether misleading and a perversion of fact. I confess I was stupid enough to be taken in by such a plain statement; but when one comes to think of it, the absurdity of a deputation of *slave-dealers* being entrusted with an official document from the acting-Governor of Mauritius to the British Agent in Madagascar is apparent; more especially when we find from the official Report of the Commissioners that the General was detested by the slave-holding population in the colony, which was loud in its praises of Governor Farquhar, who wrote high-sounding platitudes for English Abolitionists, but winked at the mal-practices of the colonists in Mauritius. The fact is that these slave-dealers, who crowded to Madagascar when General Hall assumed the administration of the colony, found Mauritius too hot for them; and Mr. Ellis, who, it must be remembered, had not visited either Mauritius or Madagascar when he compiled his *History*, must have been totally misinformed when he gibbeted the name of Governor Hall as upholding the cause of the slave-dealers.

When the first missionaries, Messrs. Jones and Bevan of the L.M.S., reached Mauritius *en route* to Madagascar, they were courteously received by General Hall, but he wisely discouraged their design of proceeding to Madagascar at that time, because, not having been authorized to pay the treaty subsidy, he justly considered that irritation against the British would be aroused in Imerina; also saying that the climate on the coast was very deadly.

According to Ellis:—"General Hall, who was the acting-Governor at the time of their (the missionaries') arrival, had discontinued all friendly intercourse with Radama. He was also unfavourable to the commencement of their mission, and they were consequently obliged to remain at Mauritius."

Governor Hall's anticipations, as it turned out, were only too correct. When the missionaries reached Tamatave, they fell into the hands of a slave-dealer named Bragg, who treated them with great fickleness and treachery. They were detained on the coast, and Radama's invitation to them intercepted; and after the deaths of Mr. Bevan and his wife and child, and Mrs. Jones and her infant daughter, the only survivor, Mr. Jones, was forced to return to Mauritius, more dead than alive from repeated attacks of fever.

Mr. Ellis says:—"Influenced by the circumstances already mentioned, which were considerably aggravated by the intrigues of parties ever anxious for the renewal of the horrible traffic in slaves" (the Mauritian planters and officials, be it remembered, and *not* the unpopular acting-Governor), "Radama permitted the slave-trade to recommence, and that it was again carried on extensively is obvious from General Hall's letter to Lord Bathurst in 1818, wherein he states that three cargoes had been imported during the preceding fortnight, notwithstanding all his efforts to forbid such illegal importations of slaves into the colony."

On the 10th December 1818, orders came from England for General Hall to leave the colony, and Lieut.-col. John Dalrymple was received with every manifestation of joy, as temporary Governor, by the colonists interested in the perpetuation of the slave-traffic. In February 1819, Major-general Ralph Darling arrived from England to replace General Hall, and this officer seems to have been at once impressed with the conviction of his predecessor, that slaves were still imported and unregistered, contrary to the law, by means of fraudulent transfers. The course pursued by Generals Hall and Darling subjected them to the odium of the Mauritian Creoles and residents. Indeed, a few days after the arrival of the Commissioners of Enquiry at Port Louis, they received an address, purporting to be from the inhabitants, wherein, amongst other things, accusations were brought against both those officers.

In July 1820 Sir R. Farquhar resumed the government; and Mr. Hastie, accompanied by Mr. Jones, sailed for Tamatave in September. That port had then again risen to considerable importance; for since the renewal of the slave-trade, upwards of one hundred good houses had been erected.

Ellis tells us:—"When Mr. Hastie reached Antananarivo he endeavoured to explain to Radama that until the sanction of the King was obtained to the act of his representative, the crime of a breach of a predecessor's act did not commonly subject the person who committed it to condign punishment; but the relations established by Governor Farquhar with him, being now authorized by the British sovereign, could no longer be subject to any interruption. But Radama did not appear to be convinced, and frequently reverted to the breach of the Treaty." This was certainly a neat way of shunting all the blame on to the shoulders of General Hall, and hinting that such an one was not "*commonly*" subject to the condign punishment which Radama judged should be his portion.

Shortly after Sir R. Farquhar's return to Mauritius, a tragic proceeding took place which is involved in some mystery. A man named Dorval, a

notorious slave-trader, having in 1821 procured a cargo of slaves from Zanzibar, was discovered landing them near the Morne-Brabant in Mauritius by a British man-of-war, which attacked the slaver. The latter vessel was stranded on the reef and set on fire, four black women left on board perishing in the flames; but the landing of the bulk of the slaves was effected, and they were concealed in the woods. As usual, proclamations and rewards of 4000 dollars for the discovery of the parties concerned were of no avail. True bills, however, were found by the Grand-jury against Dorval, the owner, and l'Hoste, the nominal commander of the vessel, who both escaped to Bourbon. Dorval returned and gave himself up in 1822, producing a secret promise of pardon, signed by Sir R. Farquhar, for all past offences, on his accomplishing the apprehension of l'Hoste, which he effected. This man was tried, but the prosecution failed through a conveniently arranged flaw in the indictment.

The Commissioners remarked:—"Whatever inducement may have prevailed with Sir R. Farquhar to accord so signal a favour to Dorval (the circumstances attending which have not been satisfactorily explained), it is much to be regretted that a full disclosure of the persons who had received or purchased the negroes, and retained them in defiance of the proclamation of Government, had not been made a primary and indispensable condition of any act of grace extended to him." The Commissioners said, with regard to the extent of the slave-trade, that one vessel, the *Coureur*, commanded by Dorval or l'Hoste, made six voyages to Madagascar, in 1819 and 1820, and the average number of negroes imported each voyage might be 150 or 200; but they observed that "it has been generally maintained that no direct importation of an entire cargo of negroes has taken place at Mauritius since the landing effected from the *Coureur* in March 1821." They added that "the measure to which we must primarily attribute its suppression within the colony was that which was adopted by Generals Hall and Darling, pursuant to the instructions of Earl Bathurst, for sending to to England for trial the parties accused of slave-trading; and the example made by their transportation in some instances to New South Wales."

Thus it appears certain, that, although Governor Farquhar might be absolved from all suspicion of guilty connivance, the extent of the trade during his administration must be imputed to a certain degree of negligence on his part; seeing that the measures taken by his substitutes during his absence, from March 1817 to July 1820, ultimately suppressed the trade. The very popularity of Sir R. Farquhar affords, unfortunately, but unmistakeably, a strong presumption against him in such a place as Mauritius was then; while the hostility of the slave-holding inhabitants to Generals Hall and Darling affords the most satisfactory testimony to their military vigilance and moral integrity. The *Times* made the following observation on the disclosures laid open by the Commissioners' Report: "Whatever dissatisfaction and resistance may have been excited by the measures for improving the condition of the slave population in the West Indies seems really to have been trifling to the towering indignation which has been roused in our semi-East Indian possession of Mauritius by measures of a similar character. And from this we would infer (it is matter of inference and conjecture only) that sincere and *bonâ fide* exertions had *not* previously been made for alleviating the sufferings and limiting the extent of slavery. We do not know who is hit by this remark, but we suppose some one will think himself aggrieved."

Sir R. Farquhar appears to have been stung by the *exposé* of the Commissioners, and yet could make no real defence; and his letter to the Secretary of State is largely one of abusive language against the Commissioners. With regard to the case of Dorval, he merely remarks that the course taken by him was the means of a pecuniary saving to Government of 5000 dollars.

Sir Robert could not bear the Abolitionists, and hoped the Government could make an example of the Anti-Slavery propagandists. Further, he wrote :—"The sneering and insolent remark on the tenderness of my early friendship for the slave-trade, referring to a time when the Abolition Acts were not known at Mauritius, and were not law there, though the spirit of them was acted on by my order and upon my sole responsibility, merits little or no observation from me ; it comes with an ill grace from men, who, if fairness and candour had actuated their principles, must be compelled to acknowledge that I have effectually done at least as much, and by a series of practical measures, to abolish the slave-trade, foreign as well as English" referring to his treaty with Madagascar, as the whole party put together, even their great patriarch himself" [Wilberforce], "and that too without entailing upon the people of England, as they have done, an enormous expense amounting to many millions sterling ; which exactions, mark me, is only the beginning of their philanthropic plans for drawing money from the people, in furtherance of their wild and visionary schemes for the general emancipation of the negroes ;" etc., etc.

When Sir Robert Farquhar talks of the "*wild and visionary* schemes for the general emancipation of the negroes," in the year 1829, we are able to take the measure of his *bona fides* in dealing with the slave-traffic at Mauritius.

From the above it is evident that the condemnation of Major-general Hall in not carrying out the conditions of the first treaty with Madagascar has been awarded without due enquiry into the facts ; and that it was well nigh impossible for him to have acted otherwise than he did, when occupying a temporary position as acting-Governor of Mauritius.

S. PASFIELD OLIVER,  
*Capt. late Royal Artillery.*

## RICE AND RICE CULTURE IN MADAGASCAR.

AMBOHITRAKOHOLAHY is one of the peaks of the important group of mountains in Central Madagascar called Ankàratra. Enquire the derivation or meaning of the name, and we are told that there the son (or, a son) of God descended, bringing with him from heaven a cock (*akòholàhy*) and hen ; that the crow of the cock was opened and found to be filled with rice in the husk ; this rice was taken by the inhabitants of Ambàrianandrianànahàry ('At-the-rice-of-the-Creator') to the south of Antsàhadlnta and there planted. This again when reaped was taken to Ambàriarivo ('At-a-thousand-rice'), where it grew well and flourished. Hearing of this, the inhabitants of Andrianakótrina wished to purchase a few grains, but the owners refused to sell. Then they begged for a few grains, but this also was denied ; so the would-be purchasers resorted to stratagem and circumvented the refusers by trailing their *lamta* over the grain, some of which clung to the edge thereof.

These few grains they planted and tended carefully; when ripe this was about sufficient to fill two hands; this again when sown, tended and reaped yielded a great increase, and from this the rice spread over the whole island;—so runs the story. Previous to this miraculous appearance of rice, tradition says that the people lived on the *Vavahy*, a species of climbing lentil. Another tradition is that a son of God came to the earth bringing with him one grain of rice; on finding a marsh in which there was a spring of water, he called the people together. When they were assembled, he said, "Look well at this seed I am planting; I have brought it that it may become your principal article of food. It will grow and appear like grass; watch well the changes it will undergo, and when you see that it has grains like this one, pluck it, remove the husks from some, and soak these in boiling water (from this the people say they learned to cook rice in water); the remainder keep till this time of year returns. Then plant it as I have done, and when you reap it say, 'This is rice, O God.'" This they did, and the rice increased and became the staff of life to the inhabitants of a large portion of the island. "Madagascar rice is of undeniably good quality. That of Carolina comes from the same stock, seed having been taken from this country to Charleston in the year 1699."\* "The most important and general department of native agriculture," writes Mr. Ellis, "is the growth of rice (*Oryza sativa*, L.), on which valuable grain the whole nation is dependent. It is not therefore surprising that the people should devote a large portion of their time to the culture and care of their rice-fields. These latter, in Imerina, are of two kinds: first the *tànin-kèlsa* or nurseries, in which the rice is first sown, and then those to which it is afterwards transplanted, which are of much greater extent."

In the month of April the preparation of the *vàry alôha* (first rice) nursery-grounds begins, while those of the rice called *vàki-ambiaty* are prepared in June. "The bursting of the buds of the *Ambiaty*" (*Vernonia appendiculata*), says Mr. Ellis, "which generally takes place in September, is a sign for preparing the seed-rice for sowing." If the ground for sowing this be covered with water, it has to be drained, and the work of clearing is difficult, because if allowed water enough vegetation here is luxuriant. The Malagasy have a proverb in connection with this difficulty: "*Asa vadi-drano, ka tsy vila tsy ifanakonana*," i.e., "Working in the rice-fields, where there is water, cannot well be done alone." When well drained, men dig up the ground with the native spade, a long and narrow-bladed implement with long and heavy handle, driven in not by the foot, but by its own weight; and the clods are not piled up, as is done in some cases, as we shall see, but are broken and mixed with manure, again worked with the spade, and then levelled for the reception of the grain. The seed-rice is now prepared for sowing. This is sometimes done by sewing it into a basket or sack, then soaking it in water for three days, after which the water is drained from it, and the basket or sack is put into a pit and covered over with grass till the seeds begin to sprout, when they are deemed ready for sowing. Great care is taken to cast the seed evenly over the field. When only about a handful of seed is left in the basket, the sower ceases his work, takes

\* See Vice-Consul Pickersgill's Report; ANNUAL X., p. 281.

The remainder home, and places it in the north-east corner of the house, that is, the sacred corner, where the ancestors are invoked, and the household or family charm is placed. Whilst carrying this he may not turn aside from the most direct way home for anything, of whatsoever importance. The reason given for this is, that if these few grains reach the house safely, the harvest will be well gathered in from the seed sown.

Sometimes the grain is sown in a dry state, an operation termed *fasy* *aditana*, when water has to be let into the field, and the grain is literally "cast upon the waters," and there it remains for a few days, so that it may soak and germinate. When germination has commenced the water is drained off. The attention then given to the fields, whether sown with wet or dry grain, is the same. Fine manure from a sheep-fold, or wood or grass ashes, is scattered over the newly sown rice; the field is allowed to remain dry for four or five days, then the water is again let in for a single day; and this is repeated until the young shoots appear above or through cracks in the earth. These nursery-grounds are usually on the sides of hills, in a series of terraces down the valleys, at the head of which are springs; or they may be strips of ground near the banks of rivers, for the sake of the water, for when the blade appears above the ground it grows in water. The young plants of the *vary aloha* are ready for transplanting in about four months, while those of the later rice are ready in three months—the latter being sown in the warmer season causes the difference in the rapidity of its growth—during which time great care and attention is given to them.

Meanwhile, the larger fields, or rice-fields proper, are made ready for their reception. First any necessary repairs must be made to the small elevated earthen divisions, ridges, or banks, which are about six or nine inches wide, and the top raised six eight or ten inches above the field. These low banks serve several purposes: to keep in the water or liquid manure, to define each field, while they also form a footpath for workers in the fields, or for those whose path may lead across the otherwise inundated plain. Then a small channel is cut along the side of these banks for the leading of water on or off the fields. The fields themselves are dug up in lines from end to end, the lines varying in distance apart from three feet to ten feet; the earth dug is about a span in breadth and is piled up in clods, like turfs or peat; on the untilled part, that they may be well dried and so easily broken. It is also said that the action of the air upon the clods thus piled up improves the soil. When dry the clods are slightly broken up and mixed with manure, and allowed to remain thus for about a month; when water is let in, and the whole is worked up together. As Mr. Sibree says, "oxen are very frequently employed to trample over the fields which have been already worked to some extent by the spade; and a score or so of poor beasts may be often seen driven about backwards and forwards in several inches' depth of water, with loud shouts and oburgations and beating, until their hoofs have worked up the clods into a soft mud ready for the transplanting of the *ketsa*." Thus prepared, the field is ready for transplanting, which takes place in August, or in October or November, according to the kind of rice, the former or the latter crop. Great care is here required that the transplanting be not delayed, as should the *ketsa* begin to send forth new shoots, it is



difficult to remove, and when transplanted will not come to perfection.

Often have I watched with astonishment the rapidity and dexterity of the *mpanitsa* or transplanter. They root up the young plants with the left hand, pass them into the right two or three times a second, and when the latter is filled, tie them with a kind of rush called *Rindra*, or with the rice itself. Hence the Malagasy say, "*Mamingo-lèna hoatra ny ketsa*," i.e., "Entangling or tying one's-self up, like young rice." These bundles are carried on the head by women or children to the larger rice-fields prepared for them. But in planting out these, their skill is marvellous; the rice-plants are held in the left hand and planted with the right thumb and forefinger at the rate of two or three in a second! If the soil be very good only one plant at a time is put into the ground; if not so good, two, and sometimes three, or even four, according to the richness or otherwise of the soil, which at this stage is like soft mud. The wife of the owner of the field stands near the workers calling out, "*Matelèha, matelèha! tòm-pokovàvy e! Aza manitsa vavy mahàlana!*" encouraging them to put the plants in closely, sometimes only two or three inches being left between each one. The diggers and sowers receive from two-thirds of fourpence to fourpence per day; the planters from one-third to one-half of fourpence per day, as wages. After being transplanted the rice-field is frequently visited, lest it should not be presenting "that soft yet brilliant green, which, when the wind rushes over the rice-fields, looks like a billowy ocean, and when the air is still and the sky cloudy, like something solid, on which we could walk for miles." In about six weeks the weeding commences; but weeds are not the only enemies to be watched, but insects, blight, mildew, and inundation, for the destructive effects of all these have to be looked out for and guarded against.

At one stage of growth, when the ear is beginning to ripen and droop its head, it is said to '*mampandainga sàsa*,' i.e., 'cause the children to lie,' or to deceive their parents. They go to look at their rice, and seeing the ears drooping in the golden sunlight, believe it to be ripe, and return shouting, "Our rice is ripe, mother!" But in the sunlight it is difficult for anyone to tell whether it be ripe or not, so the Malagasy say; you must go in the early morning, or just as the sun is setting, so as to be sure about it. A kind of rice called *Tomboka* is planted on hill sides or dry land, the planting of which around Antanimèna and other places near the Capital has greatly increased during the last two years. Not until August do the people till these fields, and then much the same mode of preparation is followed: the clods are broken by a club or mallet; the grass is removed with a pointed stake; a small hole is made with a knife; and three grains are then dropped into each hole. The people say that the rice grown in this manner is equally productive with that grown in the 'wet' fashion.

It is the work of the men to reap the rice when ripe; and this they do with the native knife with notches along its blade. The reaper holds the rice in the left hand, and cuts it down with the right; and it is then laid on the stubble to complete the ripening of the ears. The ears of two handfuls are put on the straw of that previously cut, and are placed in long rows, so as to keep the grain from the mud and wet. Women and children bind up the handfuls into sheaves, and when

dry take them to the threshing-floor. Around this the sheaves remain piled up all around it like a breastwork, till early morning, when the threshing begins. This operation, as well as the threshing-floor itself, is most simple. In many villages the threshing-floor, or *famolôana*, is public property, and so is used by all the inhabitants. It is an open space, usually circular, from which the grass has been cleared, so as to form a hard clean surface, with a stone of about two feet in height fixed in the centre. Upon this stone two or three men each beat a sheaf at a time, and the ripe rice is thus separated from the straw. It is then winnowed by the women on a rush mat, which they put into a position so as to catch the wind, and then pass the grain through both hands, so that the wind may carry away the chaff. The grain is again dried and then measured, previous to being conveyed to the house or the rice-pit.

"The pounding of the rice for the use of a Malagasy household is the work of the women—the female slaves in rich families, and the wives or daughters of poorer people—and it is probably the hardest work they have to do. A wooden mortar or *laona*, about a foot deep and six inches across, with a level square surface around the circular opening, is employed, and in this the unhusked rice is stripped of its husk by pounding with a wooden pestle or *fanôto*. It is then 'red rice,' and is the ordinary food of the poorer people, and is probably a more wholesome food in this state, just as brown bread of 'whole meal flour' is more nutritious than perfectly white bread. A further pounding divests the grain of its red skin, and it is then beautifully white rice or *vary fôtsy*. Sometimes two, three, or four girls will pound together at one mortar, delivering their blows in perfect time and making light work of their task. Rice is cooked in a wide earthen pot with a cover, and when properly done should be soft, but with each grain perfectly separate. It is eaten with wooden or horn spoons; and the *laoka* or relish may consist of vegetables, shrimps, fish, meat, or gravy, according to the means and taste of the family." "A bushel of rice," says Mr. Ellis, "when the ground is prepared in an inferior manner, without drying the earth in the transplanting ground, will on an average produce fifty bushels. If the clods are well dried, it will produce seventy; and if the ground is particularly well done and manured, it is no uncommon thing to take home one hundred bushels for the bushel sown." When any of the natives chance to have their rice ripe before that of the majority of their neighbours, they reap it, take twelve small sheaves and present them to the sovereign, saying, "We offer the first-fruits of your land worked by your subjects." The sovereign accepts the offering with thanks, and in return gives a piece of beef, one dollar, and three spades, the latter to be used in tilling the ground. Captain Oliver says: "The Hova and Betsiléo preserve the rice under ground, keeping it in circular excavations, five or six feet in diameter, and seven or eight feet deep. The form of these rice-pits greatly resembles a beehive. The sides are lined with stiff clay from the floor, also of hard clay, to the summit, where a small aperture is left, which is usually covered with a stone. Through the aperture the grain is poured when brought from the field, and through the same the quantity required for use is obtained. These subterranean granaries are constructed with great care, and rice is often

kept in them for a long time, apparently without being in the least degree injured. Some of the tribes construct their granaries or *lang-rina* above ground, and make them resemble in shape those already described; they are conical or formed like a beehive, and often rise fifteen or sixteen feet above the ground.\* The walls are thick, and are of clay carefully wrought and impervious to wet. No opening is formed in the sides, and only one small aperture left at the top closed with a stone. By means of a pole, with notches cut in it so as to form a ladder, the top aperture is reached. The *Sihanaka*, *Betsimisarakana*, and *Bezánosano* preserve their rice in wooden storehouses, raised six or seven feet above the ground on large wooden posts, which are furnished with smoothly polished projections to prevent the ascent of rats."†

The following table shows the different seasons for sowing, transplanting, etc., the two main crops of rice:—

<i>Vary aloha</i> , or Former Rice.	<i>Vaki-ambiaty</i> , or Latter Rice.
Sown in May,	Sown in August and September.
Transplanted in September,	Transplanted in November.
Weeded in November,	Weeded in January.
Ripe in February,	Ripe in April.

The *Sakalava* plant three kinds of rice, called respectively *Ovibé*, *Elatra* and *Menakely*. The peculiarity of the *Ovibe* is, that whether planted early or late, it always ripens at the same time. The kind called *Elatra* has two husks, and the *Fody* or Cardinal-bird, a species of Weaver-finch, which eats large quantities of the ordinary rice, never touches it, and it looks like chaff. The kind called *Menakely* also has two husks, and these only are red, the grain itself being exceedingly white, though only about two-thirds of the size of the *Rôjo*, or largest grained rice grown in Imerina. There is but a slight difference in the preparation of the rice-fields of the *Sakalava* as compared with those of the interior tribes; they do not use manure, and their young rice-plants, when transplanted from their nursery-grounds, are put into the ground plant by plant, at a distance of from twelve to sixteen inches apart. When gathering in their harvest, they employ oxen to trample out the corn on their threshing-floors, which are to be found near every tract of rice-fields.

The *Betsimisarakana* grow some of their rice on high ground, in preparing the soil for which they cut down the forest and burn what timber is not carried away; at times these clearings are a mile in length. The seed-rice is then planted among the ashes, in the same way that beans and maize are planted, three or four seeds in one hole. "Watered by the heavy periodical rains," says Mr. Ellis, "these generally yield as rich a harvest as that planted in the lowlands. The latter kind is called *Horaka*\* the former *Tévy*. There is no difference in the appearance of the grain, and the same price is obtained for both kinds in the market." They also plant two other kinds of rice, *Haoka* and *Ampétika*, the former

\* Such granaries may be seen in Imérina also, in valleys and plains, where the damp would injure the grain if stored under ground.—ED.

† These elevated granaries are called *trano ambo*, and are very neatly made and finished, resembling dwelling-houses in every other respect. Captain Oliver is, I think, mistaken in saying that the *Sihanaka* make such granaries. Their rice is stacked in the rice-fields for a considerable time.—ED.

On the hill slopes, the latter in the valleys, as in Imerina. They are careless in reaping their crops when ripe; the reaper takes a small basket in his left hand, and with his right cuts the ears off into it, so that much of the grain is lost. It is then put into the storehouses and threshed and winnowed when required for use.

The Rev. J. Sibree says, "The Hova are very ingenious in rice culture, but they are far surpassed by the Betsileo in the southern central provinces. Not only are the valleys and hollows terraced, as in Imerina—the concave portions of the low hills, and the lower slopes of the high hills—but the convex portions also are stepped up like a gigantic staircase. These works display not only industry, but also some knowledge of hydrostatics, for I could not discover how the water was brought to some of the low hills which were surrounded by lower ground. Many of these were terraced up to their highest point, the lines of rice-field running round them in concentric circles, so that there was not a square yard of ground unproductive. Perhaps the most beautiful and wonderful display of these rice-terraces is to be seen in the deep valleys near Zomà Nandihizana, about a day's journey south of Ambositra. In some of these I counted more than ninety terraces, forming vast green staircases right up to the top of the hills."

The Betsileo, however, eat less rice, and more manioc, sweet-potatoes, maize, and beans than do the Hova. Their improvident use of their rice when just reaped may possibly account for this, for when the harvest is just gathered in they will sell for sixpence the measure of rice which six months afterwards sells for a dollar and even more. In Imerina the Hova eat gravy, meat, or vegetables with their rice; but the Betsileo eat the rice by itself, and then any relish they may chance to have. On the east side of some of their houses may be seen a small rush basket, into which, before every meal, some rice from the centre of the cooking pot is placed, so that the spirits of their ancestors may be also fed!

The Sihanaka use their oxen for the trampling of the soil to prepare it for planting. Water is first let into the fields, then as many as four hundred or even five hundred oxen are turned into the field at one time. This trampling by the oxen for three days is all the preparation the ground receives, as it is so rich and productive. The seed too is sown very sparingly on this account. In some of their swamps they burn the sedges when dry, and in their ashes sow the seed-rice; then they turn in the oxen to trample it down, so that the birds or rats may not steal the grain. These fields are called *aiafo*. Very little attention is given to the culture of their crops, indeed they rarely take the trouble to weed them at all. They reap the crop in a like careless manner. They cut it with the native knife certainly, but it lies as it falls till a great deal is cut, when they make it up into immense sheaves. When these are dry they clear the grass from around and thresh it with a stick as it lies. Some, however, do put a mat under the sheaf as it is threshed, but even then so much is scattered that a gleaner may get from one sheaf enough rice to provide food sufficient for one person for a week.

As Mr. Sibree says: Rice is the staff of life to the majority of the Malagasy tribes, and 'to eat rice' (*mihinam-bary*) is their equivalent to our phrase 'to have food,' or 'to have a meal,' and to the Eastern and Biblical expression 'to eat bread.' Most Malagasy indeed think little of a meal

in which rice does not form the principal dish, the *pièce de résistance*. In their opinion it is rice which does emphatically *mahavòky*, 'make full,' and it is astonishing what large quantities of it a Malagasy will consume.

Intimately connected then as rice is with their daily life and a large part of their occupations, it is not strange that it becomes a kind of standard in various ways to the people. Thus, the smallest unit of money is a plump or well-grown grain of rice or *vàri-irai-venty*, ten of such forming an *èranambàtry* (another seed, by the way), which is a ninth part of a sixpence and the seventy-second part of a dollar. Then again, one *vary* (rice) is also a standard measure, first for rice, and then as a dry measure generally; one such *vary* being about three bushels.

Rice also affords a number of figures and comparisons and proverbial phrases. For instance, a penurious or niggardly person is not said 'to split hairs,' but, 'to split grains of rice' (*mamàky akòtry*). 'Rice with milk' (*vary àman-dronòno*) is a figure for something good to begin with, and other good things added to it, a superfluity of good; and so again with the phrase 'rice moistened with honey' (*vary londràhan-lantèly*); while 'rice cooked with herbs' (*vary àman-ànana*) is a figure for an intermingling of thoughts; and 'rice scattered' or 'spilled' (*vary ràraka*) is used to describe a speech with no definite plan or divisions. Again, 'cold rice' (*vary mângalsiaka*) is used of work unfinished to day, so left until the morrow; and 'rice falling down' (*mivàrilàvo*) is a figure for one in deep dejection and sorrow. And again, 'rice and water' (*vary aman-dràno*) is a common figure for things that are inseparable: for rice is made to sprout, before sowing, with water; it is sown on water; it grows first in water; it is transplanted in water; it comes to perfection and is reaped still standing in water; it is very frequently carried to the threshing-floor in small canoes in the narrow water channels along the banks; it is cooked in water; and it is eaten with rice-water as the chief beverage; the appropriateness of the figure is therefore very evident.

Rice-pits, or *làva-bàry*, it may be mentioned, were formerly sometimes used as places of punishment. For certain offences people used to be placed in one of these pits, which was partially filled with earth, and then boiling water was poured over them so as to cause death. In the times of persecution rice-pits sometimes also formed places of refuge and concealment, and occasionally of worship, for the Christian people.

In conclusion, it may be said that rice and its various methods of culture was doubtless brought by the Malagasy from their original home in the Eastern Archipelago. The rice-fields of Baly, Celebes, and other Malayan islands seem to exactly resemble those here in Madagascar, as may be seen in Mr. A. R. Wallace's descriptions in his *Malay Archipelago*. The Malagasy *vary* is doubtless the Javanese *pari*, and their *tevy* is the Malayan *tebas*. No less than fifty separate names are employed for the different varieties of rice known to the people; many of these are doubtless only different provincial words for the same thing, but their existence shows the Malagasy power of discriminating the various kinds of their chief and most prized article of food, and how for many centuries its culture has occupied the minds and thoughts of the people.

CLARA HERBERT.

## MADAGASCAR RICE-FIELDS

### IN THEIR ARTISTIC AND PICTURESQUE ASPECTS.

WITHIN the last twelvemonth a paper describing the Rice-fields of the Malagasy and rice culture has appeared in the *Leisure Hour* (Dec. 1887, pp. 842—844), going in many points over the same ground as that taken up by Miss Herbert in the preceding paper. As a pendant to that account, the following paragraphs, treating of the picturesque aspects of Madagascar rice-fields and rice culture, may be appropriately added in this place.

Speaking of the rice as it first appears in the *tânin-kitsa* or nursery-grounds, the writer says:—

"At this time, when the rice is literally growing *on* the water, if you are out in the sunshine you may see a wonderful sight—the picture of a great green mist, set with diamonds, for the sun lights up every drop of water, until you are dazzled with its shining and fain to look away. At sunset too, the water takes the flaming reds and yellows from the sky (and the sky at sunset here is worth looking at and remembering), and is a gorgeous spectacle. But do not go past the rice-fields when the moon rises, if you are nervous and alone, for then they look terrible, the pale-green of the young rice seeming to make the moonlight on the water even more ghastly and fearsome, while there is utter silence as regards mankind; for your Malagasy, rich and poor, disappears by eight o'clock, and the only sounds are the stifled croakings of the frogs, the eerie whirr of the grasshopper, and the swish of the water-rat as he makes a dash for his supper."

"After the transplanting is finished, then is the time to wax enthusiastic over the landscape. Such a sea of vivid green, without the sea, for the water lies below, and none is to be seen! Such a green! I know not what to liken it to! A soft, yet brilliant colour, which, when the wind rushes over the rice-fields, looks like a billowy ocean. When the sun is shining, then look up some narrow valley that stretches and gradually widens until it is lost in a great plain, which, spreading, seems to cover the land. Look at its wealth of green, like a great flame of green, or one immense flashing emerald!"

"The great contrast between these green valleys and plains and the mighty hills around—some rose-colour, some bleak and grey, some dark and frowning—is very wonderful and simply indescribable. Now, when I write, the rice is just losing that vivid colouring, for it is beginning to ear; but what it loses in colour it makes up in height and grace. If one must compare it with anything in England, one would be reminded of a wild grass which waves in the wind in some English meadows, and which, when plucked and shaken, sheds its seeds."

"Surely the words, 'Cast thy bread upon the waters, and thou shalt find it after many days,' must have referred to *rice*, which was bread to the people, and is really sown *on* the waters, and 'after many days' appears to view."

"Something I saw one day would be a good foundation for a picture; and if painted by an R.A., would at least have the recommendation of novelty, on the walls of the Royal Academy. It was a glorious afternoon, the sun just at its hottest, when, as I was riding along, I saw a Malagasy, clad in a shirt of dark indigo-blue cotton, standing on a red-brown mud ridge. All round him lay water, looking more like diamonds than that common fluid, with the sun looking full at it. Behind the water, and wrapping it round as it were, rose 'the everlasting hills' of every shade—of rose-pink and pearl-grey, and, seeming to touch it with their gleaming peaks, the still more gleaming blue of the sky—a sky one never sees in England, but often in Italy. I can only

describe it as it appeared to me that brilliant afternoon, and then the blue looked *alive* with light and colour.

"The man had in one hand a native straw basket, made of a sort of rush which grows here; and with his other hand he constantly took out handfuls of rice, and flung the seeds up in the air, so that they scattered themselves in falling all over the water. From where I was, every seed looked like a yellow bit of gold, as it was flung up, with the blue sky for a background; as it fell, with the colours of the hills and the dark colour of the man's dress, to make it look still *more* golden; and lastly, as it splashed lightly, and sank into the sheet of water.

"The man was 'the sower going forth to sow,' and he was sowing 'in faith, nothing wavering,' that 'after many days,' the seed would have 'a glorious resurrection.'"

Let me add, in conclusion, that the above descriptions of Malagasy rice-fields are taken from those which are part of or are connected with the great plain of Betsimitatatra, which stretches for many miles to the south, west and north of Antananarivo. This is certainly one of the most magnificent rice-fields in the world, and extends over many thousand acres, occupying the valleys, or, rather the plains, of the river Ikôpa and its numerous tributaries. It is as flat as a bowling-green, with but a few inches' difference in level as the plain imperceptibly descends from south-east to north-west. Doubtless it formed at no very remote epoch an extensive lake, with innumerable bays and gulfs; and from its blue waters the numerous hills of bright red earth rose then like islands, as they still do from the green sea of growing rice in December and January. The large population of the Capital and its neighbourhood, and the presence of the hundreds of villages in the centre of Imérina, is entirely due to this fertile plain, which is often termed 'The Rice-field of the Capital' and 'The Rice-store of Antananarivo.' The writer of the foregoing has hardly exaggerated the brilliance of colouring to be often seen in Betsimitatatra. But it is at sunset that this plain is seen to most advantage. Then the western sky is often gorgeous with floods of molten gold and crimson; while, as one turns to the east, the red clay of the hills increases in brilliance every moment, as the sun nears the horizon; the long lines of earthen walls facing the west glow in vivid vermilion; and all shades of purple glorify the distant hills with a variety of tints which are seldom or never seen under our English skies. Truly, clouds and sky, mountain and hill and plain, are often beheld by us in this inland Imerina with a wealth of colour and a glory of light which is one of our chief intellectual enjoyments, and which is ever changing and ever new!—J. S. (Ed.)



## REVISION OF NORTH-WEST PLACE-NAMES:

### SOME CURIOSITIES OF TOPOGRAPHICAL NOMENCLATURE.

ONE of the most interesting products of human ingenuity is a bad map, especially one that is archaically bad. Full-rigged ships on impossible seas, and pictorial savages reckless of latitude, are much more pleasing objects to the eye than correctly outlined mountains and a prosaic assemblage of names. Even a faithfully unimaginative chart, with great bare spaces of confessed ignorance upon it, has advantages over the Ordnance geography which knows everything. The mystery of untraveller lands allures us long before they are uplifted within our

horizon. Such mystery human nature can ill afford to part with; and yet, day by day, it dwindles from the earth like a morning mist. A restless generation is running broad highways in every direction through the ancestral woods, where our children with sigh for adventure and find nothing left unexplored. Not even Madagascar has escaped the general disillusioning. No novelist locates his *King Solomon's Mines* in an island the very heart of which has been dissected for the world's information.

But the imaginative element is hard to get rid of. It survives revision and correction with wonderful persistency, and in a map that is otherwise accurate, changes its effect and becomes irritating; like the phenomenal finger-nail which survives the morning bath and civilized wristbands of a modern Hova dandy. What, for instance, could be more incongruous than '*Little Kettlebottom*' and '*Great Kettlebottom*,' as the names of hills in a country where kettles are always called coffee-pots? The imagination in this case was supplied, no doubt, by some happy-go-lucky sub-lieutenant in the British Navy, as he settled himself down to a supper of tinned soup and sardines after a hard day's work of surveying. Nourished upon quickening aliments of that kind, the fancies of sub-lieutenants are sometimes exceedingly vivid. There was a youth so ranked, on the very same coast where the *Kettlebottoms* lie, who, being left in charge of H.M.S. *Pineapple* during the middle watch, with orders to take deep-sea soundings at a certain hour, and to summon the captain if a bottom were found, came rushing down to his slumbering chief with the startling announcement of, "Three feet o' water under the bows, sir!" The captain flew on deck in pyjamas and wildest haste, but the big corvette sailed on unheeding, and the discovery was never charted. What cooking utensil its Columbus intended to liken it to, he alone knows. A listening guest, who occupied the captain's spare cot that night, thought a very good name would have been *Frying Pan*, or, the *Shoal of Blasphemous Language*.

Any name would do for a submarine height discovered at one o'clock in the morning by letting down a patent sounding-apparatus with the line rove on at the wrong end; but it is nothing less than a breach of good manners for a stranger to dub the features of an inhabited country with foreign appellations. They that go down to the sea in ships have no business on the great waters to post up their names on other people's premises. If a voyager find an island unoccupied, let him call it what he pleases; or if he jump a claim on behalf of his nation, let him not then stop at trifles, for ousted tenants think little of their sign-boards. But if he be simply a visitor, let him behave as such, and adapt his geography to the language of the country as faithfully as he does to its conformation. His work will then be certain to meet with universal respect: it will never bewilder the native school-children at their lessons, or provoke the souls of travellers who may wish to carry it on to completion.

It was in this irreproachable spirit that an amateur geographer, during a journey made in the year 1881 round the northern end of Madagascar, took note-book and pencil and made an effort to eliminate all *Kettlebottoms*. The results of his self-imposed task have lately been made use of in a new issue of Admiralty Charts, and it may not be uninteresting to relate how some of those results were obtained.



He very soon found that the answers received to inquiries made of intelligent natives often need to be as carefully triangulated as the lineaments of the country they are intended to designate. The note-book was produced one day at a conference with a Hova governor and several members of his staff, there being present also an aboriginal Sakalava or two.

"What is the name of that conspicuous mountain over yonder?" asked the collector of information.

"*Barrahoodaka*," replied the Governor.

"How do you spell it?"

"*Ba ra ho da ka*," explained an official scribe, proud of his clerical acquirements.

"Looks Malagasy, at any rate," thought the inquirer, as he jotted down the syllables.

"That is what you call it?" he then remarked interrogatively to a Sakalava who squatted near, with his hair done up in an aureola of dangling plaits.

"Yes, *Barrahooda*," was the answer.

"Oh, it is without the *ka*, is it? Well, a *ka* more or less makes no difference. We'll put it down both with and without."

It was not convenient to investigate further just then, but the Sakalava's answer had a touch of hesitation about it, and he was made a note of for stricter examination.

"Now, tell me," said his inquisitor, shortly afterwards, in the seclusion of private quarters, what that mountain is really called?"

"The Governor gave you the name: it is *Barrahooda*; the Hova say *Barrahoodaka*."

"Very well, but what makes it *Barahoda*? There is a place called *Bàramàhamay* a few miles away, has it anything to do with that?"

"It is only a name; people call it so," was the stupid reply.

"Exactly, but why?"

"Because there is abundance of *rahòda* there."

"And what is *rahòda*?"

"A plant."\*

"Then it is really neither *Barahodaka* nor *Barahoda*, but *Bèrahòda*—'much *rahòda*'?"

"Oh! now you have it," said the aboriginal, and he smiled in the midst of his bob-tail chevelure with that beam of ready intelligence which is said to be a sure sign of trustworthiness in an interrogated rustic.

Another ray of light flashed in among the notes with greater unexpectedness. The journey was being varied by a cruise to Nosy Mitsio. On approaching the island from the east, the enemy of *Kettlebottoms* and his companion found themselves at a loss where to land. Running their boat into the first hospitable-looking cove that came in view, they hailed a native of the place, who waded out to the craft and clambered in. He was a tall Tankàrana, bareheaded and of an easily-entreated aspect, which was not belied when he at once undertook to act as pilot.

"But why cannot we go round the island and land, without further trouble, where you say the King's house is?" he was asked.

\* *Rahòda* and *Rahòdaka* are both given in the Dictionary as names of a variety of sweet-potato.—ED.

"*Tsy hisy orro*," was the answer.

"Now what in the world is *orro*?" inquired the travellers of each other. "It cannot be a floating pier, or a graving-dock, and it is not likely to turn out a mammoth hotel." *Orro, orro, orro!* they took the word to bed with them and rolled the *rrs* of it up the slopes of dream- and like Sisyphus and his boulder. Next morning the query was answered by nature to their eyesight. Proceeding across the island on foot, they topped its diminutive watershed, and there below, to the west, beheld a shelterless stretch of surf-beaten beach. "*Tsy hisy orro*," indeed: no *orro*, no *oro*, no *brona*, no *nose*, no *nasus*, no *naze*, no *ness*.

It then immediately became plain that the charts could not be correct in naming the extremity of the Mojangá promontory *Amórombato*—'At-the-edge-of-the-rocks'—although the orthography of the word had evidently been furnished by some person conversant with the Malagasy language. As a headland of crags, the place is simply *Rockness*, i.e. *An-òrombato*.

*Amòrontsanga* too was shown to be a Hova corruption, and now rightly appears as *Anoronisanga*; although the exact derivation of the latter part of the name was not ascertained. Future inquirers in that direction should remember that the original site of the town, founded of course by the Sakalava, was near the mouth of one of the creeks which open on the bays to the south.

These bays, three in number, are not to be crossed without an observation. They appear to be the only places upon which native names have been bestowed without reference to local usage. Whoever it was that conceived the idea of calling the triad '*Radama*', '*Ramanito*' and '*Rafala*,' he certainly had a soul above kitchen furniture, and, moreover, knew something of Malagasy history, for it was from one of these bays that Ramanètaka, brother of King Radama, started in chase of the Sakalava who massacred the first Hova garrison of Màrovoay. Had the spelling of the geographer been equal to his sense of the fitness of things, '*Rafala*' would probably have been written *Rafàralàhy*.

That the names were given by a foreigner is inferred from the fact that the natives never use them. Indeed, neither the Sakalava aborigines nor the Hova colonists appear to think that a bay requires any special designation, *Ambàvatòby* being an exception which helps to prove the rule.

The Hova is a landsman. When he first came to Madagascar, he at once contrived to get as far away from the sea as possible, and there he still remains, sticking to the hills of the interior as lichen does to their eternal granite. He can tell you the name of every blade and leaf that grows in precious Imèrina, but his language knows nothing of his ocean gateways. Neither bay, nor gulf, nor estuary, nor frith, nor loch, nor channel, nor sound, has any equivalent in his mother vocabulary. More's the pity, for the sea would afford him an inspiring vision of his magnificent inheritance such as he can never even dream of on his mountain homestead.

The Sakalava, on the other hand, loves to be near the sea. But his only vessel is a frail canoe, and although he can ride the waves with a bold enough heart, he is merely a navigator of creeks and inlets, and steps ashore to eat and sleep. Bays are named by those to whom they

are havens, by mariners who drop their anchors in them and lie at rest in welcome security, environed by the steadfast land.

But if the bays of Madagascar have been left by the natives to gape on the world as river-mouths only, such a fate seems more endurable than that which has befallen the great harbour of Mojangà. Fancy the noblest anchorage in the island being introduced to all the white-sailed coquettes who come in from the ocean as '*Bembatooka*,' whilst an imperious river is sweeping through the bay with a title above reproach!

"Above reproach!" exclaims the mystified stranger; "'*Betsy Bokka*' is not much of a name to boast of, surely!"

"Ah! my good foreigner, your ears are untrained. It is not *Betsy* anything, but a resonant indigenous compound, expressive of excellent things in a river."

The country through which this chief of the streams of Madagascar flows is not devoid of other supplies of water. There are ponds and swamps near most of the villages, but water obtained from such sources is generally insipid, however satisfactory it may be in appearance. The natives call it '*booka*,' as they likewise do water that is brackish. The river, on the contrary, is '*tsy boka*—'not *boka*.' But in addition to sweetness, it has also strength. As it rolls out seaward with the ebbing tide, it cleaves a brown channel through the waters of the harbour, and floods upon the offing so overwhelmingly that the Sakalava fisherman, rocking there in his outrigger, may quench his thirst a mile from the shore; and thus it establishes its greatness beyond dispute and becomes in truth the *B-tsibòka*.

And what of the harbour? How came it by the mongrel name it bears? Well, *Bembatooka* seems to be a relic of the pre-*Kettlebottom* period. In those days there were certain old sea-dogs of Salem in Massachusetts, who used to visit Madagascar during their voyages to Arabia and the East Coast of Africa. They were the pioneers of the present American agencies in Tamatave and Mojangà. The last-named place, however, had not then come into existence. Vessels making use of the harbour were accustomed to beat up into the inner bay and anchor within the point now named *Ambóantho*. Close by there was a Sakalava hamlet known as *Fòmbitòka* (say *Foombetooka*), on account of a solitary *Fòmby*, or *Rofia*, palm which grew in the neighbourhood, and which probably served as a landmark. *Fombitoka*, therefore, was heard of by the skippers of Cape Cod. But these were not the men to be purists in respect of a Sakalava place-name. Supposition has it that one of them, spending an idle day with his charts as he was bowling steadily home across the Atlantic, tried to recollect what the *Lone Palm* village in Madagascar was called, but could not. Whereupon he inquired of the mate, a person profuse in tobacco-juice and profanity, who was not more ready in the matter than his boss, but who calculated that the carpenter might be able to name the God-forsaken hole, perhaps. So they summoned to the cuddy one Mr. Chips, who, being a funny man, had remembered the *took*a, and from that took a shot at the rest, and down went *Bembatooka* in capitals.

Whether supposition be correct or not, it is certain that map-makers have followed some such lead for half a century or more. Occasionally they follow their own devices, and then they deserve whatever fate may

befall them. On the new Admiralty Charts already mentioned there are no less than fifty place-names of north-west Madagascar, the spelling of which has been deliberately altered from the orthography given in painstaking corrections. Each of those names, as written by all educated Malagasy, ends in *y*; and a very good ending it is too, flowing and appropriate like an equine tail. But the cartographers have docked it all along the coast. Wherefore their punishment shall be that some bare-legged, brown-skinned pupil in an elementary school will lift his shock head from his studies and remark: "*Marina raha tsy adala tahaka anay hiany ny Vazaha !*"

You are right, my boy! but you shall be left uninterpreted, so that the good people referred to may suppose you are saying something complimentary about them, just as they would about you if you published a map of Great Britain and Ireland embellished with such spelling-book Curiosities as *Whitbi, Sheppey, Torquai, Mersey, and Liffey*.

It is satisfactory to notice that for the most part the names have fared much better on the map which accompanies Captain Oliver's *Madagascar*. But errors are plentiful even there. Here is one of them which evidently has a history. It looks as though correction had o'erleaped itself and fallen into something else. '*Ampasimamarina*,' what are we to make of that? In the list of additions furnished to the Hydrographical Department it appeared as *Ampasimariny*. Shorn of its proper terminal it became *Ampasimarini*, as it is now to be found on the Admiralty Charts. But *Ampasimarini* no doubt seemed to the reviser of Captain Oliver's map to be meaningless. By supposing the final *i* to be a slip of the pen, and by a correcting it to *a*, he arrived at *Ampàsinarina*—'At-the-level-sand.' What could be more likely as a seaside name? Nothing, certainly; but all the same the natives persist in saying *Ampàsimariny*; and *mariny* happens to be a good Sakalava adjective meaning 'near.' The reduplicate '*ma*,' of course, is merely a clerical error.

Having arrived safely at 'The-sand-which-is-near,' the wisest course would be to haul up quietly on the beach, even though we should thereby ignore the most interesting place-name in the country; for how shall the critic escape confusion who strains at *Bembatooka* and *Mojanga*? He can only plead that it was necessary to swallow something, and *Majunga* was simply intolerable. His search for a derivation was long and far-extended. The Hova were as certain of *Mojangà* as a mother is of the name of her own child. But their attempts at explanation were merely random guesses. One intelligent member of the ubiquitous brotherhood of scribes thought he had read the riddle by suggesting the Sakalava word *jànga*, which means 'cured.' *Jànga* and *jangà*, however, are as different as accent can make them; and besides, *Mojangà* was never remarkable for curing anything, except hides, perhaps, for shipment to Salem of New England aforesaid. Thus Hova and Sakalava were both found wanting at once.

As a last resource, the puzzle was submitted to an ancient of the Islamite community,—a little old man in sandals and long Arab robe, who shifted his betel-nut quid, summoned up his totally unnecessary interpreter's English, and gave the following historical explanation:—

"Ambóalàmbo he not first come here. Sakalava not first come either. We Islam first come."

"From where?" interrupted the information hunter, on the scent of an interesting ethnographical fact.

"From Boina."

"What Boina? Boina away over the bay there?"

"Yes; but Islam grandfather he born Lamoo. Come Boina in dhow; make house; live quiet; Sakalava friend. The Sakalava king he die. All people shave heads. Sakalava devil want Islam shave beard too. That no go. Islam go aboard, sail away, come here, Nobody live nobody at all. Plenty flower, beach full. Call him '*angaia*.' Islam make town, call him '*Mji-angaia*.' Amboalambo not know how speak; he say *Mo-ja-nga*."

Shade of Great Kettlebottom! be merciful, we have all said Mojanga!

W. CLAYTON PICKERSGILL.

### ON CASE IN MALAGASY.\*

IT has, as is well known, been very much the practice, in the treatment of grammars of the different European languages, to introduce forms and terms belonging to the Latin. The principal reason for this has no doubt been, that the terminology has been fixed in teaching Latin, and it has been felt difficult to find new terms. We have had for a very long time Norwegian grammars stating that we have five cases—all the Latin ones except the ablative, just as is the case, I believe, in English grammars also. Now, as a matter of fact, the nouns have in Norwegian, just as in English, only two cases—the nominative, and the genitive or possessive, while the pronouns have three.

In this misleading teaching there is no distinction made between what belongs to etymology and what to syntax. It is a matter of course that the words in Latin have to serve in the same manner as in other languages; and what the Latin syntax teaches us about the position of words in a sentence we may expect to find again to some extent in the grammars of other languages also. But it is questionable whether the changes which the Latin words undergo are actually to be found in other languages. True it is that in all grammars we must have such terms as subject, predicate, object, etc.; yet it must be settled, according to the character of the language in question, what number of cases there are to treat of; and this will depend upon the number of changes exhibited by the parts of speech which act as subject, predicate, object, etc. This seems indeed to be so clear, that there must be a special reason for not distinguishing between etymology and syntax in treating of grammar. And this reason is, I think, easily pointed out, and has no doubt had some influence in the preparation of Malagasy grammars

\* It should be said that this paper was written some time ago; but as the subject of case was taken up by Mr. Dahle in one of his "Studies" last year (pp. 286 291, *ante*), it has been thought well to give in the present number of the ANNUAL the views of another writer on this question.—ED.

150. If the words have not different cases to indicate their position in sentences, it is in many instances difficult to find terms descriptive of these words in those positions; and to have fixed terms is a great thing in teaching. If we have a word in the possessive case, we may ask, What case is this? and get a short and definite answer. But if a word representing the owner of a thing does not change its form, as is the case in Malagasy (if nouns), we have a difficulty in finding a term for it; and this causes perplexity. I think that this has been the reason why some of the missionaries have introduced the cases found in Latin into the Malagasy grammar, although the language is extremely destitute of cases. The right thing to do, however, is certainly to treat as case only what really is case, i.e. some alteration in the form of the words. I shall try to show (1) what we have in the Malagasy language of case, as well as some phenomena referring to what we call case, and which I think ought to be treated of in the etymology; and (2) shall then mention what ought to be left to the syntax.

I.—Under this head we have three phenomena to consider:—(a) case, (b) the pronominal suffixes, and (c) the changes which words undergo when preceding what are now generally called the possessive and the ablative cases.

(a) As to the first of these, it must be acknowledged that only the personal pronouns possess what is really case; and the cases, we find, are only two. One of them exactly answers to our nominative, the other to our predicative possessive (mine, thine, ours, etc.), dative, and accusative. The nouns, the adjectives, and the other pronouns have no case. Notwithstanding this, however, the practical reason already mentioned might perhaps induce us to introduce cases into our Malagasy grammars, not only for the personal pronouns, but also for the other parts of speech. I do not think, however, that practical reasons *pro* and *con* are the only ones to be taken into account; I think theoretical reasons may be stated against the cases of nouns that have been introduced; and these reasons I gain from the following rather interesting feature of the language. If we look at the pronominal suffixes, we see that some of them, as *-nay* (our [exclusive of the person spoken to]) and *-narò* (your [plur.]), draw the chief accent to themselves from the word to which they are affixed; and that others, as *-ko* (my), *-ny* (his, her, its or their), leave the accent where it was; e.g. *ny tranonàny* (our house; lit. the house-our), *ny tranonarò* (your house); but, *ny tranoko* (my house), *ny tranony* (his [etc.] house). If any word follows as a dependant on these suffixes (those which draw the chief accent to themselves), which we may call *suffi.va gravia*, they do not alter, thus: *ny tranonay miràhalàhy* (lit. the house-of-us who-are-brothers); but the others, which may be called the *suffi.va levia*, cannot carry any attribute, and are substituted by the personal pronoun, thus: *ny tranon' izy miràhalahy* (lit. the house-of-those who-are-brothers). What case is *izy* here? Of course nominative. But if *izy* is nominative, how can the word *olona* (people) in the phrase *ny tranon' ny olona* (the people's house) be possessive? This incongruity has been felt, but the gordian knot has been cut, and it has been said that the possessive case is sometimes substituted by the nominative. This *a priori* statement helps us very little, as we must ask, How can the possessive be substituted by the nominative? I imagine

that there are other phenomena in the Malagasy language which may be adduced as analogous to the above. Often when we have two objects in a sentence, only the first is put in the accusative, the second being put in the nominative; e.g., "*Nijèry àzy sy izahay ny olona*" ("The people saw them and us," lit. 'we'). Here certainly the nominative is put instead of the accusative, but not without a reason. As the last pronoun in the sentence (*izahay*) is some distance from the verb which governs it, the force of the verb is not made to bear upon it, and this accounts for its being nominative. Something analogous to this we find in sentences having *fa*, which may be called object-sentences. We say, "*Nilàsa tamiko izy fa làsa ny olona dry vèry ny vòla*" ("He told me that the people were gone and the money was lost"), not, *ary fa vèry ny vòla* (and that the money was lost). Here the last sentence has lost the mark of being governed by *nilaza tamiko izy* (he told me). I think we may say that both these instances are witnesses of Malagasy shortness of thought; and it is of great interest to compare such sentences with long ones in Latin books having the cases correct throughout. But in the phrases *ny tranon' izy mirahalahy* (the brothers' house) and *ny tranon' ny olona* (the people's house) there is not the slightest difference of position in the words *izy* and *olona*, and no reason whatever can be assigned for the statement that *izy* in the one is nominative, and that *olona* in the other is possessive; we are therefore quite at liberty to conclude that as *izy* is nominative, so also is *olona*.

The idea of connection between the thing possessed and the owner of the thing is not signified by the name of the possessor being altered in form, but by a change in the word preceding, and this does not at all answer to what we generally mean by 'case.'

As for the personal pronouns, we have only two cases, and hence the names of these cases must be other than those now in use; neither possessive, genitive, dative, nor accusative will do. Now to coin a couple of new words is not so very difficult, and as far as the one case is used when the word is independent, and the other when it is in some way or other governed by another word, we might call the two cases 'independantive' and 'dependantive'; but as we should certainly prefer known terms to something quite new, we might call them *casus rectus* and *casus obliquus*.

I have chiefly spoken of the possessive case; what is called ablative is, however, exactly similar to the possessive as to form; and as regards the other cases I shall simply say, that as in them the words undergo no change, we ought not to call them cases, in so far at least as Webster is right in defining case as "a mode of varying words."

(b) Respecting the pronominal suffixes, there is very little to say which touches the question before us. They represent, when added to nouns and adjectives, the attributive possessive case and answer to our possessive pronouns, or to the possessive case of the personal pronouns (my, thy, his, her, etc.). But when added to relative or passive verbs, they have quite a different meaning. They may then be said to represent the logical subject; e.g., "*Nalaiko ny vòla*" ("I took the money;" or lit., "Was-taken-by-me the money"); "*Nanaovako nahàdro izy*" ("I made him a meal"); but by what combination of thought and idiom of the language this result is brought about, it is certainly difficult to say.

- (c) The change that words undergo when they precede what is generally called a possessive or an ablative case is a phenomenon quite unknown in our languages, but is somewhat analogous to the Hebrew *status constructus*. The change which the words undergo is the addition of the syllable *ny* (in many cases shortened to *n'*) to all words except those ending in *ka*, *tra*, or *na*. As for the words that end in *ka* and *tra* and which have three syllables, having the accent on the antepenult, they constantly change the *a* of these syllables into *y*; those which have two syllables sometimes change this *a* in like manner, and sometimes add the syllable *ny*. Those ending in *na*, with the accent on the antepenult, drop the final *a*, or, as we should perhaps be more correct in saying, add the *ny* after the final *na* has been thrown away.

As to this *ny*, different views are entertained. It may be questioned whether the *n'* in, for instance, such sentences as *ny tranon' ny olona* really stands for *ny*, and whether it is right to put the apostrophe to denote the supposed elided *y*. Is not this *n'* simply put after *trano* for euphony's sake? and ought we not perhaps to write *ny tranon' olona*? I have no hesitation, however, in acquiescing in the practice now in use, and in taking it for granted that it is really *ny* which is added to the words. But then the further question arises, Which *ny* is it? We know two words *ny*: the definite article, and the pronominal suffix. If it be either of these two, it must of course be the latter. It is certainly a wrong opinion of Père Ailloud that "the idea of possession is expressed by the article *ny*," and his orthography in the phrase *ny antsy ny jiolàhy* cannot be agreed to. Mr. Griffiths is of opinion that the *-ny* is the suffix of possession; and if I have understood him rightly, he regards the noun following such a *-ny* as being in apposition to it, and explains *ny tranon' ny olona* to be, "the house of him, the man." But whatever connection there may be between this *-ny* and the suffix pronoun, it certainly may be said virtually to act only as a euphonic *ny*, and this is especially seen by its wide and varied usage.

I think we may say that this *-ny* (or *n'*) is used in five different ways. It is used (1) to indicate that a thing is possessed by somebody, as *ny tranon' ny olona* (the people's house); (2) that something is done by somebody, as *nalaon' ny sasalàhy* (done by the boy); (3) to indicate the Latin dative, as *màmin' ny vahôaka* (sweet [i.e. agreeable] to the people); (4) in comparisons, as *talôha kèlin' izàny* (a little earlier than that); (5) to indicate place with adverbs, as *aizan' ny tanàna*? (in which part of the town?) With these meanings the suffix pronouns *-ko*, *-nary*, etc., may also be used, and so far it is not possible to deny their relationship with the *-ny* here treated of. And as to the words ending in *ka* and *tra*, which have the pronominal suffixes joined to them, we see that the vowel of the pronominal suffixes and the *k* and *tr* of the *ka* and *tra* are combined, just as is the case with the real suffixes in many cases, as in *hèvitro* (my meaning), *sàtroko* (my hat). What still remains having reference to the position of words in sentences belongs to syntax, and I shall briefly mention what I think is necessary to be stated.

II.—Speaking from a practical point of view, that is, from what is necessary in the preparation of school grammars and in the teaching of the lower and higher classes, I shall try to show that we may dispense with case, as we can manage without it. As for the nominative of the



nouns and adjectives, nothing as to case is needed, for we simply have to explain to our pupils that such and such words are subject or predicate in the sentence in hand; and this being done we have said what is needful to be explained. When I meet with a sentence like this, "*Milalao ny ankizy*" ("The children play"), I explain that *ny ankizy* is the subject of the sentence; but as the form this word has in this position is the only one it possesses (except when in *status constructus*), I have no need to ask what case it is in, and I think it a mistake if I do, and so also with the predicate. If the subject or the predicate be a personal pronoun, I must, in teaching, mention that the case of this pronoun is nominative, or whatever other name might be deemed more correct.

The Malagasy language is different from ours as to what we call the possessive case, not only (as mentioned before) in regard to the non-existence of a *real* possessive case, but in other respects also. What we may call an attributive possessive case is signified by putting the word which precedes the 'possessive' in the said *status constructus*, if such 'possessive' be a noun; but if it be a pronoun, it is made a suffix thus: *ny tranoko* (my house), *ny tranon' ny olona* (the man's house). This part of what touches upon the possessive case might be treated of in a section speaking of additions which may be made to the parts of the sentence.

A predicative possessive is in Malagasy expressed in an entirely different way from the attributive one. If it be a noun, it is preceded by the adverb *any*, thus: "*Any io olona io ny trano*" ("The house is this man's"); and if it be a personal pronoun, the oblique case of this pronoun is used thus: "*Ahy ny trano*" ("The house is mine").

What is called ablative is the agent joined to passive and relative verbs. We might, to have a fixed term, use the word 'agent,' and explain this to be the performer of the act expressed in the word to which it is joined, although, on account of the grammatical structure of the sentence, it is not the subject. This, however, would only be an explanation of the meaning, not of the form, of the word; but in this respect we need no term, as the word does not alter in form. We only note that the suffix pronoun is used when a pronoun is the agent.

With regard to the object, several things must be mentioned. As for common nouns, generally no change in their form takes place. Before proper nouns, and also before common nouns commencing with *ra*, as *ralèhilàhy*, *rafòtsibè*, and now and then before common nouns without the *ra* (I have only found a few specimens of the latter kind, as, for instance, "*Nila an-jànanany ho vady izy*" ["He wished her daughter for a wife"]), we put the adverb *any* (or *an-*). This is also the case with the interrogative pronoun *iza*. As for the personal pronouns, the oblique case is used.

Finally, we have the vocative. What is needful to be said about that may be put thus: When a word expressing the person addressed is used, we put the particle *ry* before it, or *ô* after it, or use both. It is true that we have in teaching no term for these words, but I do not see the use of speaking of them as being in the vocative case, which they really are not. There might be a term found for such words, but I have not yet seen any.

S. E. JORGENSEN.

## OUT OF THE BEATEN TRACK IN MADAGASCAR:

## A VISIT TO THE ANTANKARANA SAKALAVA.

**F**INDING myself at Nôsibé after a delightful trip round the Comoro Islands, I determined to take advantage of my proximity to the mainland of Madagascar to visit that interesting country. My wish was to visit some part of the island unknown, or at least little known, to European travellers. Acting on the advice of the French Commandant, I determined to pay a visit to an independent tribe inhabiting the north-west peninsula of the island, called Antankarana, or "people of the rocks." Wishing to travel as quickly as possible, I engaged a fine *lakana* or canoe, which could carry a good deal of sail, and engaged a crew of four at two francs a day and their rice. Through the courtesy of the French Commandant, I secured the services of an excellent guide—Prosper by name, a native of Nosibé, and a Roman Catholic. He spoke very fair French, besides Malagasy and Swahili, and was invaluable. Having purchased some American cloth, and bright-coloured handkerchiefs to trade for food with, my preparations were complete, and on the morning of the 1st of August I set sail with my little party. Although the mainland of Madagascar is well in sight from Nosibé, yet when we were packed into the canoe, luggage and all, it looked anything but safe to put out to sea in her. We did not get very far from land before a good breeze sprang up, and we sailed along grandly, and reached the island of Nôsifaly soon after noon. The breeze now dying away, and it being terribly hot in the *lakana*, I determined to camp for the night in this small, well-wooded island, which is separated from the mainland by a very narrow channel. There is a small village inhabited by Sakalava, whose chief received me very civilly, and gave me a nice clean hut to sleep in. The people mostly talked Swahili, which they have picked up from the Arabs, who have a small trading station on the mainland close by. The next morning, starting before five, we sailed along the coast, steering north for Ifasy. Evening brought us to this important native trading-place, and here I intended to leave my canoe and walk up to the capital of the Antankarana. The capital is called Ankarana, and the king's name is Ratsimiáro. Accordingly, I placed my canoe in charge of an Arab merchant, and prepared for a march on the morrow. I started the next morning soon after four o'clock, and almost before it was light, Prosper carrying my gun and cartridges.

I had considerable difficulty with Prosper, who was one of those people who are born idle, but I managed to make him keep up without resorting to blows. We marched for four hours and a half over very rough country, doing I think about twelve miles, and then halted for breakfast—coffee, rice, and bananas; started again at ten and walked till twelve, when we halted till four. Again making a start, we reached a good-sized village, called Manambato, a little before seven. We had walked I calculated about thirty miles, a very good

day's work. We had a capital dinner here of fowls and rice; fowls are very plentiful in this part of Madagascar and can be bought for about twopence apiece. The natives here told me that Antananarivo was not more than three hours' journey from Manambato, so I resolved on an early start, so as to reach the capital before breakfast. Accordingly starting at sunrise, I arrived in sight of the capital a little before nine. I halted outside the town and sent Prosper to inform King Ratsimilao of my arrival. He soon returned to say that the King would receive me at once at the conference-tree in the middle of the town, and I could hear the tumtums beating, announcing that he was on his way there. Accordingly, taking with me a large sheath-knife I had brought as a present for his Majesty, and accompanied by Prosper as interpreter, I at once proceeded to the interview. The King was seated under the tree (a magnificent tamarind), surrounded by his chiefs. A chair for me was placed on his right, and when I advanced, helmet in hand, he rose, shook hands very cordially, and motioned me to be seated. He first inquired if I had come to trade there, and when I told him no, he said he was very sorry, as he wanted some white traders to come there very much. He then asked me if I was a praying man, and he seemed much relieved when I told him no. I explained I was merely a traveller, and being anxious to see the country, I had walked up from Ifasy. He could not make out why I had walked, why I had not come in a *filanjana* (palanquin), and when I told him I preferred walking, he gave me to understand that he did not quite believe me. He wanted to know why the English preferred the Hova to the Sakalava; whether I had ever seen Queen Ranavalona; whether Queen Victoria loved her very much; and then he expressed his opinion that Queen Victoria would love him if she knew him better. I did not like to offend his Majesty by telling him that probably Queen Victoria was quite ignorant of his existence, so I acquiesced. I then presented him with the knife I had brought with me, and asked permission to remain a few days in the capital. He told me a house was ready for me, and that in the evening there would be plenty of *laka* (rum). We shook hands again, and I went off with Prosper in search of my hotel.

I found my boys already in possession of one to which they had been directed by one of the chiefs. I started them off at once to buy fowls for breakfast, as it was now nearly noon, and I had eaten nothing since leaving Manambato. They soon came back shouting, "*Omby, omby*" (an ox, an ox), and sure enough behind them came a fine bullock the King had sent me as a present. Soon afterwards some girls arrived with a couple of geese, a couple of fowls, and a basket full of coconuts and bananas. Here was a princely supply for six men, and I soon made an excellent breakfast. Having smoked a pipe and ordered the boys to kill the bullock and get dinner ready by sundown, I set off to walk round the town. There was nothing of interest to be seen in it, and I think the most striking feature was the enormous number of drinking shanties. I have seen a town in Northern Queensland, where every fourth building was a public-house, but in Antananarivo I believe you could buy rum in every hut. The houses were as well built, some of bamboo, but mostly of the *rufa* palm, and they

most threatening manner, rushed forward as if to attack the new-comer. He at once bolted down the street. I afterwards found out that he represented a *lolo* (ghost), come to carry off one of the women. After he had disappeared, there was a general dance of rejoicing, in which both men and women joined, and after that more rum. It was now long past ten, so I asked permission of the King to retire to my hut. He replied, rather huskily, that it was very early, but gave me leave to go.

The next morning I determined to go out shooting, so after an early breakfast I left the town at seven o'clock. I took with me Prosper and four of Ratsimiaro's men, and left my own boys at home to rest themselves and get over the effects of the previous evening's debauch, which were very apparent. About four miles to the north of Ankarana there is a fine forest-clothed mountain called Ambôhitra, and thither I turned my steps. There is no four-footed game to speak of found in any known part of Madagascar, and the forests round Mount Ambohitra proved no exception. I shot a couple of lemurs, and could have shot a good many more, but they were all of the same species, and it seemed rather butchery to kill them. I also shot a very handsome bird about the size of a heron, called by the natives *Voronôsy*—white with black point on the head, tail, and wings. It is, I fancy, a species of ibis. I also saw great quantities of the little green paroquets so common in Northern Queensland, and some bright-plumaged little honeysuckers I have seen often in South Africa. The forest itself was very interesting from the great variety of the timber, much of which was unknown to me. I recognized, however, ebony, sandal-wood, several kinds of acacia, the tamarind, mango, guava, and a great variety of palm, especially the beautiful "traveller's-tree" (*Urania speciosa*), with its splendid fan-like head. The first time I ever saw this tree was in the cinnamon-gardens in Ceylon; but here seems its natural home, and thousands clothe the beautiful slopes of Mount Ambohitra. They supplied me with many a good drink this day, and if it grows all over Madagascar as luxuriantly as it does in the country of the Antakarana, it would make travelling comparatively easy. I killed two snakes during my walk, one a good-sized fellow about four feet and a half long. My guides told me it was not poisonous. They call all snakes *Kakalava* ('long enemy'), but from what I could learn, the only one they fear is one they call *Pily*, which I fancy is the boa of Africa. The Swahili name for the boa is *P'ili*. I walked till eleven, and then rested till two, when I went down to the lower land and followed the course of the river back towards the town. I saw a good many duck, both teal and the brown wood-duck of Australia; the natives call them all alike *Tsiriry*. I got three couples, and also a couple of big birds they call *Vombè*, a kind of goose, but I should think rather fishy to eat. They told me there were plenty of guinea-fowl about, and also a little bird they call *Kitânolâno*, which I fancy from their description must be the snipe; but I saw none of either.

I reached the town at sunset very tired, and spent an exactly similar evening to the previous one. The King told me he would give me a guide who would take me to the coast a nearer way than by passing through Manambato, so I determined not to start next day till after

breakfast. I presented his Majesty with my day's bag, at which he seemed pleased. He also hinted very plainly that he would like my gun, but that I did not feel inclined to part with; I presented him, however, with twenty-five cartridges, though what he will do with them I do not know, probably wear them as a necklace. Next day I had breakfast at six, and having rewarded my guides of the previous day with some American cloth, I prepared to start on my return journey to the coast. The old King was waiting under the tamarind tree to say good-bye, and the whole population seemed to have congregated to witness my departure. As I approached, the people set up a mournful kind of chant, which Prosper afterwards translated for me thus:—

"Oh departing is our friend—oh! oh!  
 Oh scatter'd are the calves,  
 Oh weeping are the women,  
 Oh sad is our chief—oh! oh!"

They stopped singing when I reached the place where the King was seated. I then thanked him for his hospitality, and wished him a long and prosperous life. "Go in peace," was the old man's answer; and then, just as I was moving away, he again asked my name. Prosper translated it into something which sounded very unintelligible. The King repeated it several times, and then saying, "May I never forget it," he waved his hand as a final adieu. I took one of his men with me as a guide; and, as our little party passed out of the town, I could hear them again singing their plaintive melody, "Oh departing is our friend—oh! oh!" A more interesting simple-minded people it would be hard to find, and I felt grieved to think that civilization (?) in the shape of rum must in no long period deteriorate, if not entirely destroy them. King Ratsimiaro, although he has only been brought in contact with the Arab traders at Ifasy, has the manners of a European gentleman, and his people were all most courteous in their behaviour. I believe an attempt was made some thirty years ago by the Jesuits at Nosibè to start a mission at Ankarana, but they received so little encouragement that they gave it up. Though I do not think Ratsimiaro would at present receive missionaries at his capital, I believe a mission stationed at Ifasy might do much good work amongst these simple-minded people. We had a terribly long tramp this day, my new guide insisting that if we pushed on we should reach Ifasy by sundown. It soon, however, became apparent that we should not, so at four o'clock I determined to halt, and start again with the moon at eight. This we did, and soon after eleven we sighted the sea. Next day I got rid of what remained of my cloth, and started at noon. I camped that night on the north side of the island of Nosifaly, and the next evening arrived safely at Nosibè. I wish I could have spared time to remain longer amongst the Antankarana, but I was anxious not to miss a man-of-war which was shortly expected in Nosibè. I will only say, by way of finishing my account of this trip, that should any of my readers find themselves, in the course of their travels, in the neighbourhood of Madagascar, they cannot do better than pay a visit to King Ratsimiaro and his interesting subjects.

*From "Temple Bar."*

## VARIETIES.

GEOLOGICAL AND TOPOGRAPHICAL JOTTINGS FROM THE NORTH,  
EAST, AND WEST OF MADAGASCAR.

“ON the eastern side of this bay [Diego Suarez], which is much exposed to storms, the trees are shrivelled, and so matted and interwoven together that they are quite impervious to man. The substratum of the surrounding hills is composed of sandstone and columns of madrepore, many of which latter form hollow cylindrical points; most of the others are apparently primitive rock, of volcanic production, in heterogenous masses, which seem to have been at some period in a state of fusion. This place abounds in shells, particularly the *Harpa*, which our young officers collected in great numbers.”—p. 37 of *Capt. W. F. W. Owen's Narrative of Voyages to explore the Shores of Africa, Arabia, and Madagascar*. London: 1833.

“We next made Cape Amber, the most northern cape of Madagascar, a little to the southward of which is a low rocky point formed of hollow cylindrical columns of madrepore; this is Point Amber.”—p. 38.

“Most of the other islands [to the northward of Port Louké, N.E. coast] are well wooded; but many are mere rocks of madrepore, their bases undermined or washed away, and the tops overhanging in the most fantastic shapes.”—p. 39.

“The coast from St. Augustine's Bay to Boyana Bay [on the western side of Madagascar] is almost an unvaried, low, marshy plain, irrigated by barred rivers, bounded by a line of sharp-pointed coral masses, uncovered when the tide is out, and in two or three places, a complete archipelago of rocky islets, assuming a variety of whimsical shapes, among which that of the cauliflower appeared the most predominant.

“The shore is thickly covered with trees of a stunted growth, above which, in the immediate vicinity of the sea, the elegant *Casuarina* is occasionally observed. The coral islets and reefs that skirt the coast are very numerous, and to those unacquainted with them extremely dangerous; but to others they afford at all seasons safe and commodious anchorage; the extensive group termed Barren Islands, in particular, forming excellent harbours, yet they are only worth resorting to for wood, being without fresh water.

“The islands in the whole extent of this coast are low, formed of coral, and seldom exceeding one mile in circumference. It is an observation worthy of remark, and equally applicable to the whole coast, that the reefs on which they are situated always extend to the southward, a fact that it is difficult to account for, otherwise than by supposing the violence of the south-south-west wind causes a heavy sea, which sweeps from the surface of that part of the reef immediately exposed to its fury some deposit, which in time forms an island. That which renders these reefs particularly dangerous to those unacquainted with their vicinity is, that the water is discoloured on every part of the bank, so that their situation is not to be distinguished.”—pp. 97, 98.

“The Bay of Bembatoka is in reality the estuary of several rivers falling into it from distant parts of the interior. It is seventeen miles in depth, and three and a half across at the entrance, but inside nearly eight, excepting about half-way in, where the shores on each side approach and leave a narrow channel, through which the pent-up water rushes with so much violence as to have scooped out an abyss of sixty-three fathoms in depth. The shores are in general low, and covered with mangroves, but in some places they rise into a lofty chain of hills.”—p. 99.

"Near the village of Pàsandava the mountains that surround the stupendous and inaccessible peak of Mataola take their rise. This chaotic mass, from the vast chasms and craggy steepes of which it is composed, presents a grand and awful appearance. The portion that immediately fell under our inspection was evidently volcanic. . . . Some of the islands abound in large masses of hardened earths of different colours, incorporated and stratified with quartz and basalt, or lava resembling it."—p. 136.

"The West Minow Group consists of an assemblage of islands and perpendicular rocks or patches of coral, amounting in all to twenty-seven. The largest of the islands is termed 'Great Minow' and is of a peculiar form, resembling a pair of compasses open towards the sea, at an angle of fifty-five degrees, with one leg four miles and a half long, and the other nearly eight. When at anchor among the group, we appeared as if in the crater of an extinct volcano, the surrounding islands being so many pinnacled relics of its ancient circumference. With the exception of two or three that are low and of coral, the rest are lofty and of basalt, columns of which, either straight or curved, form most of the precipices and bold prominent points. Those at the north-west extremity of the Great Minow are particularly grand and imposing, being slender, perfectly straight, and about sixty feet in length, varying in the number of their sides from four to six, the latter being the most general. In their arrangement, the parts of one are perfectly adapted to fit into those of another, forming so compact an assemblage that they appear like an undivided mass."—pp. 137, 138.

#### HURRICANE ON THE EASTERN COAST.

ONE of the most grievous hurricanes ever remembered in these parts visited Tamatave on Wednesday, the 22nd of February. Other storms have lasted longer and proved more fatal; this was noted for suddenness and extreme violence.

The morning passed as an ordinary tempestuous morning, and I did not realize anything unusual until noon. Then the wind seemed very fierce, and I observed with great sadness the most lovely of our cocoa-nut palms lying like a broken reed. Some say it was thirty years old. The stem, now it is on the ground, measures thirty-eight feet, and above that rose a magnificent head of some thirty fronds, each about twelve feet long, the upper ones a bright living green, and so shaded off till you got tints of brown and red in the under and older ones, with clusters of cocoa-nuts also in every stage of immaturity up to ripeness. It was "a thing of beauty" on which I had often gazed, not, alas, to prove "a joy for ever." When I saw it prone I first realized that the wind was something extraordinary. About the same time I saw a woman with a child in the corner of the sort of entrance hall downstairs. The woman I recognized as one who lives close to our gate, and the child I had christened not long ago. They had rushed in here for shelter because their house had been blown down, and the man soon followed carrying their household goods. Directly after came Ramànanjoëlina, the teacher, and his wife from their house, which was under one roof with the Boys' School in the N.W. corner of our compound. (This house is in the S.E. corner.) They had sat in their house hoping to weather the storm, until they found it actually coming down over their heads; then they escaped hither, where they still are and are likely to be, as the school and house were flat on the ground a few minutes after they had left. From that time people flowed in from all sides, and I suppose there were at last about one hundred of all ages and degrees, including a baby one week old, with its mother. Her I accommodated on the sofa, and administered sal-volatile to her and others who were faint and cold. Food was out of the question for any one, but I hope most had already eaten their mid-day meal. And there they sat, all about the rooms below, in pools of water, both what they had brought in with them,

and what came in at doors and windows. My rooms upstairs were pitch-dark, all the shutters being made fast. The rain came in tremendously at the ridge of the roof, and the floor was like a bath, but very happily my books and other goods, being disposed round the sides of the rooms, absolutely escaped damage, for which I am most truly thankful. After a time it seemed unsafe to go upstairs, for the rooms and all the furniture rocked; and down below, leaning against an outer door under the verandah, it felt very much like being at sea, for the house seemed to bound and strain her timbers, like a ship in a storm. It seemed doubtful whether the house would stand, and one felt that at any moment we might all be either buried under its ruins, or left shelterless and blown about like chaff in the wind. I quite expected a night of this suspense, but about 4 o'clock we found the shaking of the house less, and from that time the wind gradually sank.

Some of the people left, but more than forty slept here, besides a lot in the kitchens; and loads of luggage of the most curious description were brought in, goods saved from the ruined houses, as soon as the storm was less. Some of us hastened to inspect the Church. How it had escaped utter ruin is a surprise to me, for the wind entering at the north door had bulged out the whole of the south wall, and thereupon a large part of the floor of the nave had sunk down. (Our buildings here are entirely of wood, and the floors are raised some three feet above the sand.) Then the wind escaping had carried off a piece of the roof, some fifteen feet square, at the north-west corner, just over the font, and had carried it some seventy feet, to beyond the altar! The western porch was blown and twisted about in a surprising manner, and looked like a demoralized bathing machine. This was all the actual damage to the structure, but the harmonium and everything inside was soaked with wet. We carried such things as we could into the house. As evening drew on, we served out rice to all those who were sleeping here, and had prayers, as indeed we had had at mid-day also, remembering especially those at sea.

The scene in the calm grey of the next morning was remarkable, the ditch outside our gate had become a broad stream, and the body of a drowned or was floating in it. The bridge was under water; houses all round were more or less in ruins. Our fence was lying flat all round our place; the paths were blocked with green boughs, recalling cartloads of evergreens in the English streets at Christmas. Our beautiful trees lifted up bare and broken arms to the sky. What was yesterday a Paradise was now a desolation.

The next day I heard that our really beautiful little church at Mâhasôa, eight or nine miles away, was in ruins. Yet we have much cause to thank God for our protection, for, so far as I know, only one life was lost on land. In the harbour, alas! some twenty sailors were drowned.—A. M. HEWLETT.

#### *IVATOLAHY: A REMARKABLE ROCK AND SANCTUARY.*

HIGH up on the side of the valley of the Manàlalôndo river, where it bends round to the south-west before joining the Kitsâmby, stands a huge monolith, the size of a church tower, which has commanded the veneration of bygone generations, who saw in it something so unique and awe-inspiring as to stamp it the special work and chosen dwelling place of the gods.

Originally it was to all appearance part of a huge gneiss boulder, similar to thousands that are to be seen scattered all over Imerina, but of vast size; and like many of them, cleft at some pre historic time into three parts, leaving the vertical surfaces of cleavage as clean as if cut by a knife. The outermost third, to the south-west, has fallen forwards, and lies prostrate twenty yards below, leaving the other two still erect, but parted by a chasm five feet across and equal in width from top to bottom. (What was that Titanic force that could thus play nine-pins with such huge pieces?) The centre block with its south-west face now exposed and absolutely vertical from



base to summit—well nigh a hundred feet—is the largest and most imposing of the stones. Its base is nearly 30 ft. square, and it stands upon a little terrace of green sward, which about its outer sides is level, but rises steeply behind, with numerous very large boulders buttressing the hill.

The ground before the two large stones has been partitioned off into a series of pens by means of low rough stone walls, with carefully formed gateways, and rising one above another with the slope of the hill. These were made by 'the ancients,' and were often the scene of religious ceremonial and feasting, the second enclosure from below being the most sacred spot of all. Nor has the 'odour of sanctity' altogether left the place, for even in these days of greater enlightenment, when men smile as they tell of the old heathen superstitions, there are those who secretly hold to their old faith. On the occasion of a recent visit, a cock had but lately been killed there, and its blood smeared on the great stone; while in a cleft near were stuck some of its feathers.

The name 'Vatolàhy' is the same word which is applied to monumental stones or landmarks, which are mostly single blocks of gneiss from 6 to 15 feet long set on end, this one being, *par excellence*, the monolith. It dominates the deep valley in the bottom of which have collected hundreds of great boulders, so as quite to cover from view the river, which finds its way below them, for the space of half a mile. And so great is the obstruction to the passage of its waters, that in the wet season a lake is formed above. The sides of the stream there are bare of vegetation for some distance, as though for long periods they were deep under water. A similar disappearance, and for a longer distance, occurs on the Antsèsika, which this river joins two miles and a half below Ivatolahy (see ANNUAL IX. for 1885, p. 83\*), their combined streams reaching the Kitsamby a quarter of a mile further west.—WM. JOHNSON.

#### THE HOT MEDICINAL SPRINGS OF VONIZONGO.

VONIZONGO is perhaps one of the least likely districts of the Imèrina province from which "to hear some new thing;" for this wilderness country, with its scattered inhabitants, presents, from year to year, but little to vary the monotony of its silent valleys and hills. There are few places, however, which, though generally uninteresting, do not afford *some* objects worthy of notice; and I may mention two or three such objects found in Vonizongo which may prove of some interest. First of these may be noted the hot medicinal springs.

Of these there are two with which I am acquainted. The first is situated near the north bank of the river Ikopa, two hours to the west of the lofty hill Antáramàmana, and near to the village of Ihàsy. This spring was visited, it is said, by the former Queen, Rànavàlona I., during a journey to Manèrinèrina; since that time, I believe, it has been guarded from the public, and no one is allowed to use the waters.

The better known medicinal springs are found about half a day's journey to the north west of Fiarèmana, near the Ikopa, and on the way to the Sàkalàva village of Manèva. The benefits of these springs are said to have been discovered about twelve years ago by a native woman who was suffering from skin disease. After bathing in and drinking the water, she declared herself cured, to the wonder of her friends and the public. The news rapidly spread from village to village, until an immense number of invalids, suffering from all imaginable diseases and carrying bag and baggage, made pilgrimages from various parts of the country far and near, to try the effects of the wonderful hot water. A rumour was spread at the time that Queen

\* A point exactly one mile and a half due north of the village of Ambèrokely, as given on the map, would mark the site of Ivatolahy.

Ranavalona II. intended visiting the spot; but with wise discretion the Queen first despatched some of her officers to make an examination of the country and springs before proceeding thither. A report may probably have reached Her Majesty of the remarkably unhealthy position of the place; the springs being situated in one of the hottest parts of West Vonizongo, at the foot of the Antàmponkètsa hills on its western side; and this may account for the Queen not having visited them. An artificial enclosure of stones had been made round the spring, forming a small pool scarcely sufficient for one person to bathe in at a time. Not long after the visit of the Queen's messengers, the crowds of people who had taken up their temporary residence around this wretched spot gradually returned to their various homes, unwillingly discovering that the fever infesting the valley was far more injurious than the waters had proved beneficial. Shortly after the discovery of the springs, I sent some of the water to Dr. Davidson, then living at Antanarivo, who analyzed it and gave me the following result of his examination. "The water is of a mawkish taste, somewhat similar to water that has been boiled; it is slightly acid, and contains no free sulphur. It contains abundant sulphuric acid in combination with a base, probably soda or magnesia. The total solid residue of 50 cubic centimetres is about 1½ grains of pretty white salt. The water may be of use in some skin diseases and in chronic liver complaints (not organic); also in some forms of dyspepsia and constipation, and in many of the nondescript affections often associated with debility. The doctor adds, 'I hardly think that the accounts given me of it by a native will be confirmed by experience. He said, 'It cures the blind and the leprous, and paralysis, and everything but *death*.' This must be taken with allowances!'"—E. H. STRIBLING.

#### REMARKABLE CAVES IN VONIZONGO.

IN Vònizòngo there are several large caves of considerable interest. The chief and largest I have seen are about five hours' ride to the west of Fianarantana, near to Bélàfika between the Antàmponkètsa hills.

In November 1879, accompanied by Mr. Isaac Sharp (of the Society of Friends), then on a visit to Vonizongo, we started off in the early morning for our exploration of the great caves called Anjòhibé. Having secured an intelligent guide, we were conducted with little trouble to the vicinity of the caves, a most romantic spot covered with long grass, various trees and brushwood, with numerous rocky descents which rendered our progress somewhat difficult. The mouth of the cave we now reached was so low and narrow that we had to advance on "all fours" to enter it. We found the cave well worthy of a visit, not only from the interest connected with its history, but also from being an extremely novel and remarkable spot. At the entrance is a small porch about fifteen feet square, which served as a rendezvous for the guards during time of siege; and from thence another smaller cavern suddenly descends, easily discoverable by the hollow sound of our footsteps. From the porch just mentioned we advanced, still crawling, to an opening in the south-east corner, climbing up to which we cautiously descended again by huge stones to a second division of the cave; at the bottom of this we found a plentiful supply of running water between the rough boulders forming the floor. Advancing slowly along the dark passage by aid of the lantern, we now entered the chief and largest room, which had apparently served the inhabitants for kitchen, living, and bed-room. Here we found the fireplaces, two in number, and two bedsteads consisting of immense stones arranged aloft to the south-east; while to the north we discovered a large spring of deliciously pure water. This chief division of the cave is much loftier than the other two, and would probably accommodate 150 persons in a time of siege. The whole cavern is of course extremely damp, and the floor of the chief room is composed of sand. Satisfied that we had left no part un-

lored, we were now leaving the cave, when our energetic guide was seen dancing towards new depths, beckoning us to follow, and assuring us there were several other caverns below still unexplored by the foreigner. We had, however, discovered one of the largest; and deciding to leave the rest for future exploration, we sat down at the mouth of the cave to hear from our friendly friend a little of its history.

Anjohibe was formerly, during time of war, the hiding-place of two brothers and their followers. These two Sakalava chiefs were thus enabled for many years to defy the authority of any neighbouring power, even that of the Antankarana, who utterly failed to displace Andriamahaibola and his brother, the elder warriors of Anjohibe. When attacked by enemies, they would at once find refuge in the caves, where, with the plentiful supplies of water and provided with rice, these Sakalava brethren would defy their enemies from Imèka for any length of time, assisted probably by other tribes of Sakalava from the west. During the reign of Andrianampoinimerina these two notorious chiefs were subdued, since which time they never regained their former independence or returned to their villages between the Antamponketsa hills. Near the caves are the ruins of the villages formerly inhabited by the two chiefs and also the large graves where they with their ancestors lie buried.

A daughter of Andriamahaibola, the elder warrior, is still living at the distance of about an hour to the east; and our guide was desirous of our paying her a visit that we might obtain further information about her father and his remarkable exploits at Anjohibe. Unfortunately we were unable to pay a visit to this Sakalava lady; and proceeding on our way eastward, arrived at the village of Fihaonana, from whence we made our way to another most interesting spot called the Martyrs' cave.

This cave is situated a few minutes' walk from the north-east of the village, and is noted as being the place of meeting for many of the Vonizongo Christians during the dark days of persecution. We were conducted thither by Razaka, the senior pastor of Fihaonana, who gave us a sketch of bygone times, with the part he himself had taken in the secret meetings held in the cave. This place is described by the late Rev. Dr. Mullens in his *Twelve Months in Madagascar*, and is shown in one of the illustrations of that book. The doctor says, speaking of Razaka: "He said that they often used to long for a rainy night in order that they might be able to sing. He showed us the underground passage beneath the floor of his house, by which, when the soldiers came to search, the inmates and visitors could escape. He accompanied us to a pile of immense rocks, and showed us the little cave three feet high, beneath the big boulder, into which they used to creep for their meetings, and the hollow where their Bible was hid away. He brought vividly before the sufferings and the persecution which his heroic brethren and himself had endured; and in him we realized something of the power of that faith by which all had been sustained" (p. 119).—E. H. STRIBLING.

#### SOME SOUTH-EAST COAST CUSTOMS AND SUPERSTITIONS.

IN a late number of the *L.M.S. Chronicle*, the Rev. A. S. Hockett gives the following particulars about some of the southern and south-east coast customs.

"One curious custom we noticed [among the Bâra] was that of prohibiting loads from being carried into the town on both ends of the bamboo. At the entrance of many towns may be seen a pole stuck in the ground with a cross-arm and a stone slung to one end, to indicate this absurd custom. On inquiring the reason of this we were informed that it was *fâdim-pâhavàlo* (prohibited on account of enemies) and *fâdim-bàratra* (prohibited on account of lightning), which, being explained, means, that when the *mpisikidy*, or diviner, was consulted as to the best means of keeping off the attacks of neighbouring tribes, and the lightning from striking their houses, he gave answer

enforcing the adoption of the above-mentioned custom. On trying to find out what notions they had of a Supreme Being, it seemed evident to us that they have some belief in a Creator, to whom they are indebted for their harvests, as every year they present an ox, some rice, and rum, as a thanksgiving offering to Him."

"The inhabitants of this district [around Ambàhy] are called Taifasy (or, more correctly, Ntefasy), and appear to be above the average Malagasy in intelligence. It seems that many years ago the present Prime Minister conducted an expedition against these people and conquered them, taking a large number back to Imèrina with him, where they and their children were taught to read. Afterwards they were liberated and returned to their homes, and consequently we found that a large proportion of these people were able to read more or less imperfectly."

"Continuing our journey northwards, along the sea-coast, we reached Ambòhipèno the following Saturday. This place is the largest town of the district on the banks of, and near, the river Mâtitanana. Here we were in the midst of a large and most interesting tribe, known as the Taimóro, or Ntémóro, who have been very properly called an Arab colony, as there are unmistakable evidences that the ancestors of these people, at least on the male side, were Arabs, who were probably wrecked on the coast. They possess what they call their *Sôra-bé*, or 'Great Writings,' and these are evidently taken from the Koran, with many additions and emendations. They write a kind of Arabic.

"They seem proud of their origin, and have great faith in the 'Great Writings.' In times of sickness, or calamity, or sorrow, the writings are consulted, and the portion bearing on the affliction is copied on to a leaf of the Traveller's-tree, which is then soaked in water, and the water drunk by the afflicted person. The leaf is afterwards rolled up and sealed with beeswax, and worn round the neck as a charm. In cases of dispute, if the accused denied the crime with which he was charged, he was ordered to do one of the following:—

"(1) To drink gold water—*i.e.*, a cup of cold water with a nugget of gold dropped into it, after a volume of curses had been pronounced over the water; and if nothing happened to him he was proclaimed innocent. (2) To swim across the Matitanana, which abounds in crocodiles, and his reaching the other side in safety would prove his innocence (see page 421, *ante*). (3) To walk across a rice-field, and if a snake crossed the path, or a bird flew up, or anything unusual happened, it was regarded as a decided proof of guilt.

"The Ntemoro are divided into two main classes—*viz.*, the Antainony, or the reigning race, and the Talaotra, or the priestly race. The latter are again divided into (1) the Anakàra, who may be styled Malagasy astrologers, as it is their business to watch the heavens, and when anything unusual appears, consult the 'Great Writings,' and prophesy accordingly; and (2) the Taitsomaito, whose duty is to watch the earth, and when any extraordinary phenomena occur, such as earthquakes, etc., to state what they forebode. Many are the superstitions and curious customs practised by these people, and in fact a volume might be filled with descriptions of them. One other fact should be mentioned, however,—*viz.*, that the Ntemoro appear more solicitous for the welfare of their children than some other tribes, and have a strange custom of cutting off a small round patch of hair at the back of the heads of their children, to indicate those who are still under the guardianship of their parents. After they are married, or have assumed responsibility, the hair is allowed to grow again."



## BOTANICAL AND NATURAL HISTORY NOTES.

## MADAGASCAR WILD FLOWERS.

[T is commonly remarked by Europeans that the wild flowers of Madagascar are far from being as numerous or as beautiful as those to be met with in most countries in Europe, or indeed in the Temperate regions generally. This is probably correct as a general statement, but in certain months, and in some parts of the island, wild flowers may certainly be seen in very great profusion and in considerable variety. I have never seen elsewhere so beautiful a display of wild flowers as that which met our view when travelling from Antsirabé in Vakinankaratra to Antananarivo in the middle of December (1887). Leaving Antsirabé and proceeding for several miles towards the north-east, the level country up to the foot of the long ridge running north and south, which is ascended about four hours after leaving Antsirabé, was gay with flowers, which literally covered the *tanety* or level downs, and in many places gave a distinct and bright colour to the surface of the ground. Among these the most prominent was a palish-pink flower, on stems from a foot to eighteen inches high (called by the people *Kotosay*), and also the lovely deep-blue flower called *Nifinakanga* (lit. 'Guinea-fowl's tooth,' *Commelyna madagascariensis*), which latter covered the paths (recently cleared and widened), and also occurred very abundantly among the grass and the other flowers.

In many places, especially near villages, whether deserted or still inhabited, a plant with small pale-blue flowers, almost exactly like our English forget-me not, grew in dense masses, but on stems a foot or two feet high, showing a pale-blue tinted surface even at a considerable distance. The beautiful crimson flower called *Avoko* (*Vigna angivensis*, Baker) was very sparingly seen, but the *Vonènina* (*Vinca rosea*, L.), a pale pink flower, was very frequent, as well as several species of bright yellow flowers; one of these was a species of Compositæ, with a tuft of minute compound flowers looking like a small yellow brush; others were star-shaped; the whole forming in many places a brilliant mass of gold. Three or four species of white flowers—one with a large calyxless corolla bending over and facing the ground—were very frequent; and here and there a few late examples of (I think) a terrestrial orchid were seen. A month or six weeks previously these were the most abundant flowers met with, at least on the higher land to the north-east of the plain I have been speaking of, and their clusters of waxy-white flowers were very conspicuous. Certain species of these, or perhaps only varieties, of rich crimson and also of purple, were even more beautiful; and a few of these still remained among the later flowers in the middle of December.

We reckoned that there were from twenty to thirty different species of wild flowers then in bloom on these downs of Vakinankaratra, gladdening our eyes by their varied beauty and abundance as we travelled northwards on that glorious morning. As we got to the higher ground, however, I noticed that the blue *Nifinakanga* became very scarce, and was also much diminished in size, but deepened in colour, becoming almost of an indigo shade. The pale-pink *Kotosay* was also much less abundant on the heights, but the white orchids were still in flower in many places. Seven weeks previously these poor *tanety* had been also gay with great masses of a brilliant crimson flower, a leguminous plant, which grew in clusters of many score of spikes growing close together. But in December only here and there was there a flower left, and hardly a seed-pod, the great majority having been scattered by the winds. Our ride that day certainly made us obliged to modify the weeping statement frequently expressed about the poverty of Madagascar

wild flowers. There was abundance and variety enough on that journey to delight the heart of a botanist, or indeed of any one having eyes to see the beauty of God's handiwork.—JAMES SIBREE, JUN. (ED.)

IDENTIFICATION OF SOME FISHES FROM E. COAST LAGOONS.

<i>Koràngo</i> or <i>Trèotrèoka</i>	<i>Caranx hippos</i> , L.
<i>Bàrahôho</i>	<i>Genyoroge marginata</i> , C.V.
<i>Tsàrasômotra</i>	<i>Polynemus tetradactylus</i> , Sh.
<i>Fibojèbo</i>	<i>Mugil robustus</i> , Gthr.
<i>Tsôka</i>	— <i>borbonicus</i> , C.V.
<i>Fiana</i>	<i>Gerris oyena</i> , Forsk.
<i>Fiampôtsy</i>	<i>Chrysophrys sarba</i> , Forsk.
<i>Sarôy</i>	<i>Gobius giuris</i> , Ham. Buch.
<i>Vànouvàno</i>	<i>Ophichthys orientalis</i> , Mc.A. Found in the sand at outlet of lagoons.
<i>Làmbantrôna</i>	The young of a species of <i>Mugil</i> .

R. BARON.

LAND AND SEA SHELLS.

MADAGASCAR is somewhat rich in Land and Freshwater Shells; many of these are of large size, and belong to the genera *Helix*, *Bulimus*, *Achatina*, *Eurycratera*, *Megalostoma*, *Melania*, *Cyclotus*, *Cyclostoma*, *Navicella*, *Lymnea*, and *Nerita*. *Cyclostoma De Burghæ* was brought by Madame Ida Pfeiffer from Madagascar, and was then worth five pounds, although really only a snail. See *Proc. Zool. Soc.*, 1873, p. 452; 1875, p. 389; 1876, p. 488; 1879, p. 728.

The Sea Shells are largely of the usual Indian Ocean types, but many of the *Cypreæ* are remarkable for their exquisite markings (see engraving of *C. madagascariensis* in *Cassell's Nat. Hist.*, vol. v., p. 205).—J.S. (ED.)

MADAGASCAR FORAMENIFERA.

(Extract from a letter.)

"I mentioned in a late note something about Langley Kitching's Madagascar and S.E. Africa shore sands. He will be glad to learn that they have turned out very valuable, at any rate two out of the three packages,—the Port Natal ballast sand was of no use.

"In 1820 D'Orbigny described a genus of Foraminifera (*Pavonina*), no specimen of which was ever found again for more than 50 years. He gave no particulars save the locality "Madagascar," and as it had utterly anomalous characters, it had been a puzzle to all subsequent observers who did not regard it as a myth. Indeed it was regarded as apocryphal till some four years ago, when I had the luck to meet with some, then a few imperfect specimens, in one of Prof. Percival Wright's gatherings on the Seychelle Islands. I then suggested its near alliance to a well-known genus, and was laughed at by a foreigner or two, who imagined that wisdom will die with them! It was not with the smallest expectation of meeting with it again that, when you wrote to me some years ago, I mentioned the desirability of having Madagascar shore sands to look through, if Langley Kitching had the opportunity of collecting such. Hence my astonishment and delight at finding six or eight beautiful specimens in the stuff from Tamatave. Under any circumstances *Pavonina* is a very interesting and important form, and from this locality doubly so.

"The stuff from Algoa Bay also yielded one quite new species, and fine specimens of two others of which the *Challenger* had supplied only poor ones, both undescribed as yet; one or two of these will be figured in the *Challenger*

**Memoir.** As I believe Langley Kitching is a naturalist himself, I thought that he would be pleased to hear that his kind care in the matter had yielded such excellent results."—H. BRADY.

*Foraminifera collected at Tamatave in 1879 by Langley Kitching, Esq.*

<i>Planorbulina mediterraniensis</i> , D'Orb.	<i>Sagrina raphanus</i> , P. and J.
<i>Amphistigina Lessonii</i> , D'Orb.	<i>Operculina complanata</i> , DeFr.
<i>Rotalia Bucarii</i> , var.	<i>Fulvinulina repanda</i> , var.
<i>Polystomella crispa</i> .	<i>Miliolina striata</i> .
<i>Cymbalopora bulloides</i> , D'Orb.	<i>Orbitolites complanatus</i> , Lank.
" " <i>tabellæformis</i> , Brady.	<i>Nonionina armata</i> .
<i>Globigerina bulloides</i> , D'Orb.	<i>Miliolina</i> sp.
<i>Truncatulina lobatula</i> , var.	

#### THE MADAGASCAR FISH-EAGLE.

"THE margin of this bay [Pàsandava] abounds in a large species of brown Eagle, apparently subsisting on fish, as they generally choose the overhanging branch of a lofty tree projecting from the side of some sheltered nook, where the uninterrupted smoothness of the water enables them more readily to perceive their scaly prey. The eagle's dexterity of wing is surprising: the moment he sees a fish come near the surface, he pounces down with the rapidity of lightning to seize it; yet so well does his keen sight measure the distance, that, on reaching the water, even should he miss his aim, in an instant, by a strong exertion of his sinewy pinions, he arrests his headlong flight, and, scarcely wetting his talons in the water, soars majestically back to his watchful post."—*From Capt. W. F. W. Owen's Voyages*, see p. 504.

The bird mentioned above is one of the three eagles found in Madagascar and is known to naturalists as *Haliaëtus vociferator*. It is, as Capt. Owen describes, a fish-eagle; and the following particulars are given of it in Messrs. Pollen and Van Dam's work, *Recherches sur la Faune de Madagascar*, 2me partie, p. 43:—

"This eagle is not uncommon in those portions of the north-west coast which we have traversed. One may often see it, sometimes hovering in the sky almost out of sight, describing circles and uttering unceasingly its noisy cry of *kwauw-kwauw*, sometimes darting upon the great tunnies which leap up from the water. The *Ankoay*, which is the name it bears among the Antankarana and northern Sakalava, especially frequents the mouths of rivers in order to fish in the rising tide. At early morning it leaves its young ones, returning towards evening to bring them their food, which usually consists of fish. During the heat of the day one may often see the bird perched on the branches of the pandanus trees which border the sea and the river mouths. These birds construct their nest in the highest trees of the forests which extend along the shores of the sea and the banks of the rivers. The nests, which are of considerable size, are formed of stout branches of trees. One day while hunting we perceived one of the nests in a tree of such a height that it was impossible to climb it even by aid of a rope ladder. There was nothing for it but to fell the tree, which was done by the natives with much skill. We found an eaglet in the nest in a state sufficiently developed to have quitted the nest in a very few days. The nest was about three feet in diameter. Over the inside was scattered a considerable quantity of fish bones and the crania of some large fishes. While the tree was being felled, the eaglet's parents having seen from a distance their young one's approaching ejection, came to its help, uttering loud cries and sweeping so near the heads of those at work that they feared every moment being attacked by the formidable talons of the eagles. It was only when we had killed the male bird that his mate quitted the place to return no more. The eaglet, which we fed upon fish, meat, and rats, arrived safely in Europe; but subsequently dying, it has found a place in the Netherlands Museum."—*Translated by J.S. (Ed.)*

## LITERARY NOTES.

**NEW BOOKS ON MADAGASCAR.**— During the year 1888 a large addition has been made to the published volumes of M. Grandidier's great work *Histoire de Madagascar* (see page 429, *ante*). The following have been issued during the past twelve-month :

*Histoire naturelle des Poissons* ; 1 Vol. descriptive Text, and concluding part of Atlas of 53 Plates.

*Histoire naturelle des Plantes* ; 2 parts of 1st Vol. of Atlas of 100 Plates.

*Histoire des Mammifères* ; 1 Vol. (additional) of Text, and 1 Vol. (addl.) of Atlas of 123 Plates.

*Histoire naturelle des Insectes : Lépidoptères diurnes* ; 1 Vol., Text and 63 Plates ; *Coléoptères* ; 1st part of Atlas, 25 Plates.

*Histoire de la Géographie de Madagascar* ; 1 No. of Text, and 1 No. of Atlas of Maps, 34 Plates.

*Les Origins de l'île Bourbon et de la Colonization française à Madagascar*, par M. I. Guët ; Paris : pp. 303 ; 1888.

*Madagascar, et les Peuplades indépendantes abandonnées par la France*. By ex-Col. Du Verge. This is a work which, where it treats of the non-Hova tribes, is chiefly made up of wholesale and unacknowledged appropriation of papers and pamphlets written by other writers, some of them articles appearing in former numbers of the ANNUAL. Its pages have been transcribed in the weekly issues of the *Madagascar Times*, since March 31st, together with an English translation. As a specimen of literary piracies, see *Madagascar Times* for Sept. 8th, where, as Mr. J. C. Thorne says, a most "impudent case of literary dishonesty and plagiarism" is plainly shown by the reprinting in the same column of the Rev. C. F. Moss's account of a visit to Antsihanaka, and Col. Du Verge's pretended visit to some other place hundreds of miles away. An

examination of other parts of book, and comparison of them with other papers by English writers, reveal the sources of several chapters. Seeing that Col. Du Verge is so much indebted to English writers for his materials, it is a ungrateful of him to abuse and everything English as he does throughout this *valuable and original*.

**PAPERS AND PAMPHLETS ON MADAGASCAR.**— In the *Leisure* of Dec. 1887 (pp. 842–844), is an article on "Madagascar Rice-fields ;" in the same magazine for June (pp. 426–428) is an article by the G. Cousins, entitled "Malagasy fables," consisting of translations of native fables about "The Dog the Alligator," "The Wild-boar the Chameleon," "The King of Birds," and "The Eel and the Dragon fly." In *The Chronicle of the London Missionary Society* for July (pp. 295–303) is a paper by M. C. Thorne on "Elementary Science as organized, carried on and sustained by the L.M.S. in Madagascar." In the same magazine August (pp. 359–364) is an article entitled "Native Art in Madagascar" by Mr. Hume Nisbet, with an illustration (copies of native drawings) of "Missionary's Outfit for Madagascar ;" by Mr. Henry E. Clark pp. 12 ; J. F. Turner, Doncaster.

In the *Bulletin de la Société Géog. commerciale à Bordeaux*, 1886, is a paper by M. Th. F. entitled "Quelques notes sur le commerce de Madagascar."

In a Centenary volume published by the Société Philomathique Paris, 1888, is an article, "Les zimbabwés," by M. A. Grandidier ; p. 100. "Madagascar ;" article in *Nouvelle Géographie universelle d'Elisée Reclus*.

In the *Linnean Society's Journal (Botany)* for Nov. 1888, is an exhaustive paper on "The Flora of Madagascar" by Rev. R. B. F.L.S. Of this production Mr C



F.R.S., and Mr. J. G. Baker, said, it was "the most le and important paper that ver appeared on the Flora of gascar, and that it would in future afford the basis of our edge of the flora of the island."

all probably give the substance treatise in our next number.

BOOKS IN MALAGASY.—The fol- have been issued at the L.M.S.

Antananarivo :—*Ny Diksisio- amy ny Baiboly: natao ho avana ny Zavatra maro voa- io amy ny Soratra Masina* nary of the Bible, for explain- ny things in the Holy Scrip- ; edited by Rev. James Sibree, 8vo, pp. viii. and 910, with loured maps and 100 woodcuts.

is (with the sole exception of le in the time of the first mis- the largest book that has ever issued from the mission presses lagascar, and the editor is to gratulated on its completion.

re and time and labour expend- it by the editor must have very great. The volume con- 911 separate articles, of which han half have been written by bree himself, and the remain- ive been supplied by various rs of the L.M.S. and F.F.M.A. as. Several maps and engra- have been introduced, which rely to be helpful to readers derstanding the letterpress. ther the work is one of perma- alue, and is calculated to be t service to intelligent natives, ally to pastors, preachers and rs.—T.L.

*i-teny amy ny Asan' ny Apo- misy Fampianarana sy Ana- ihasoa* (Homiletical Commen- the Acts of the Apostles); by . Peill; 8vo, pp. xii. and 328, wo maps.—*Ny Fahagagana y Jesosy Kraisty Tompon-* (The Miracles of our Lord Je- rist); by Rev. J. Wills; 8vo, pp. d 119.—*Ny Tantaran-dRaza- y Mpitan-drina ny Fiangona- i Fihaonana any Vontzongo* iography of Razaka, Pastor of ana in Vönizongo); edited by

Rev. T. T. Matthews; 16mo, pp. 71

—*Lakolosy sy Ondana* (Transla- tion of Miss F. R. Havergal's 'Morn- ing Bells' and 'Evening Pillows'); by Miss Amy E. Brockway; 12mo, pp. 65.

A new (or rather, revived) quarter- ly periodical has been issued by the L.M.S. Press, commencing the 15th of last July, entitled *Ny Mpanolo- tsaina* ('The Counsellor'), 8vo, pp. 48. This magazine was first issued eleven years ago and appeared from May 1877 to Dec. 1880, but was then discontinued. It contains arti- cles of a more advanced and fuller character than any other mission periodical, and is intended to meet the needs of the educated and intel- ligent class of Malagasy.

The following have been issued from the Press of the F.F.M.A. :—

*Ny Ady Masina. Nataony Fohn Bunyan* (Bunyan's 'Holy War'); translated into Malagasy by F. Ra- soamanana, Rev. R. Baron, and Rai- nandriamampandry, 15 Hon. : 16mo, pp. 268.—*Ny Tantaran' ny Mpa- monjy* (The Story of the Saviour); by F. Rasoamanana; 12mo, pp. xii. and 266.—*Hatransy no mahavaky teny* (Reading at Sight); by Mr. Herbert F. Standing. A new system of teaching to read by syllables, with illustrative diagrams; in lithography, 20 pp.

For the S. P. G. Mission :—*Ny Fi- lazantsarany Jesosy Kraisty Tom- pontsika nosoratany S. Faona*, etc. (Commentary on the Gospel of St. John, with Introduction and Expla- nation on the Doctrine of the Logos); by Rev. F. A. Gregory, M.A.; 8vo, pp. xxix. and 204.

For the Medical Mission Board :—*Pathology sy Anatomy Morbida* (Pathology and Morbid Anatomy); translated from Dr. T. H. Green's work by Rabàrijaona, Student of Me- dicine; 8vo, pp. xiv. and 182, with 14 lith. illustrations and 14 pp. expla- natory of same.

For the Native Government :—*Ny Telegrafy Elektriika* (Handbook on the Working of the Telegraph); fscap. 4to, 32 pp., with 26 lith. illustrations.

The following translations of stan- dard English theological works have

been issued from the S.P.G. Press.

*Ny Filazan-hevitry ny Sym-bolum, atao hoe koa Ny Credo* (Bishop Pearson on the Creed); translated by Rev. F. A. Gregory, M.A.; cr. 8vo, pp. viii. and 590.—*Horæ Paulinæ, na Fampisehoana ny Faha-marinan' ny Soratra Masina milaza any S. Paolo* (Archdeacon Paley's 'Horæ Paulinæ'); translated by Rev. E. O. Mc.Mahon; 8vo, pp. 116 with map.

The following have been issued by the Norwegian Mission Press: *Homiletika*; by Rev. S. E. sen.—*Hevi-teny amy ny Ev* (Commentary on the Gospels Church Year); by Rev. I. J. *Appendix* to the Hymn-book.

The following is from the 1 the *Madagascar Times*:—*Angrafy Malagasy na Fomba ratana* (Malagasy Phonography by A. Tacchi; 16mo, pp. 20.

## BRIEF SUMMARY OF IMPORTANT EVENTS MADAGASCAR DURING 1888.

### POLITICAL AND SOCIAL.—

The chief political event of the year 1888 has been the despatch in the month of July of an expedition, under the command of Rainimiadana, 15 Hon., to the neighbourhood of St. Augustine's Bay, in order to establish Hova authority over the turbulent Vêzo and other south-western tribes. New governors have also been appointed to several important posts.

During the months of August, September, and October, the Queen with her Court made a visit of nine weeks' duration to Tsinjoarivo, a place about 50 miles south of the Capital.

For a considerable part of the year great misery has been caused to the people of large tracts of country in the northern and north-western parts of Imérina by large armed bands of robbers, who have almost depopulated certain districts in Vönizôngo, Anàtivôlo, and other places. These marauders, it is said, have formed fortified camps, from which they sally forth to attack the people, numbers of whom have been killed, many more carried away into slavery,

while hundreds of cattle have been swept off. Other parts of the country to the south of Imérina have also suffered in the same way, although to a less extent.

Large concessions of forest land in the north-eastern part of Madagascar have been made to European companies. One of these is a district of 40 miles square at the head of the tongil Bay and ceded to an American company; and another, in the sula of Marôa (inclosing that to the east), to a company directed by M. Maigrot, the Italian. Gold-mining concessions have been made to certain French and English subjects; and gold has been discovered during the year in several new localities.

During the month of October the people of the Capital were much interested by the visit of Mrs. Mary C. Hon. Sec. of the American W. Christian Temperance Union. The lady has been travelling in Madagascar for more than five years, lecturing and speaking on temperance, purity, and other social subjects. Mrs. Leavitt, during a visit of three weeks, addressed no less

twenty-four meetings, her speeches being mostly translated into Malagasy; and concluded with an address in the Palace Church, and a private interview with Her Majesty the Queen, who took a very kindly interest in her work. Mrs. Leavitt's visit was well timed, for drinking habits have certainly greatly increased of late in all parts of the country; and she had opportunities of addressing very large meetings, both of men and women, at the half-yearly assembly of the Imèrina Congregational Union.

LITERARY.—During the year 1888 the printing in England of the finally revised version of the Malagasy Bible has been carried on under the care of the Chief Reviser, the Rev. W. E. Cousins. This new version is printed in larger type and on a larger page than the last two editions of the Malagasy Scriptures, and will form a rather bulky volume of from 1500 to 1600 pages. A small separate edition of the New Testament has also been completed, and a first instalment of it was received here at the end of October.

OBITUARY.—MRS. HOGG. Many Malagasy, as well as Europeans who have been in Madagascar, would hear with regret the death of Mrs. H. Hogg, late of the Medical Mission in this country. For several years this excellent and kindly-hearted Christian woman was matron at the L.M.S. Hospital in Antananarivo, and laboured hard for the spiritual as well as the bodily welfare of those who were admitted as patients into the institution. Mrs. Hogg passed away, after much suffering time from cancer, in the early part of this year.

MR. F. A. CHESSEON. It seems only fitting that a word or two should be said in this ANNUAL to record the death of Mr. Chesson, for he was a sincere friend to the Malagasy, and laboured hard during the Franco-Malagasy war to awaken the interest of English people in Madagascar, and sympathy for its people in their struggle against France. To Mr. Chesson was due the formation of the "Madagascar Committee," which did so much to spread infor-

mation about this island, and to bring the facts of the dispute before the British public. All oppressed nationalities struggling for their rights and liberties have lost a valuable helper and advocate by Mr. Chesson's early removal; and his loss is one that will not soon, if ever, be fully supplied.

RAINISOA RATSIMANDISA, 12 Hon., Officer of the Palace. The death of this venerable Malagasy officer in June broke the last link uniting the present time with that of the first L.M.S. missionaries. Rainisoa was a remarkable old man, having reached upwards of ninety years of age. For several years past he was the only surviving pupil of Mr. Griffiths; he was one of the first Malagasy who received baptism at his hands; and he and his wife were the very first natives who were united together by the rites of Christian marriage. He was one of those who assisted the first missionaries in their literary work, and he always claimed to have been the translator of the *Pilgrim's Progress* into Malagasy; and during the last few years of his life he was engaged in making for the Queen a translation into Malagasy of *Matthew Henry's Commentary* on the Four Gospels. One of Rainisoa's most marked peculiarities was the intense veneration and affection in which he held the memory of his early teachers. He had a good knowledge of English, and used often to read and pray in that language with his family; while all of them, children and grandchildren, he had taught to sing English hymns and sacred pieces to the old-fashioned tunes sung in England seventy years ago. His mind and memory were vigorous to the last, for he died (at 93) not of old age, but from burns occasioned by a lamp having been overturned, and part of his dress in consequence catching fire. He was remarkable also for having had but *one wife* during his long life; and this, by all those who know anything of Malagasy social life, will be admitted to be a very noteworthy, almost a unique, fact. His wife died about three years ago.

# DAILY TABLES OF TEMPERATURE AND

JANUARY.						FEBRUARY.						MARCH.					
Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.	Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.	Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.
1		61	65	75	73	1		64	66.5	82	76.5	1		61	63	78	
2	.02	60	64	71	71.5	2		64	66.5	83	77	2		63	65	79	
3		56	62.5	67	69	3		64	66	80	75.5	3	.25	62	64.5	80	
4	.02	57	62	70	70	4		61	64.5	80	75.5	4	2.17	62	64	80	
5		57	62.5	74	71.5	5	.01	63	66	82	77	5		.02	62	63.5	79
6		56	61.5	78	74.5	6	.26	61	62.5	75	74	6	.60	59	62	71	
7	1.20	60	63.5	77	73.5	7	.22	58	61	79	76.5	7		54	61	73	
8	.90	61	64	70	69.5	8		61	62.5	80	77	8		58	62.5	77	
9	.57	58	62.5	78	73.5	9	.10	63	64	83	78	9	.55	60	63.5	74	
10	.35	61	64	81	75.5	10	.50	62	63.5	78	77	10	.04	58	63.5	74	
11	1.61	63	65	80	76	11	.09	62	64	82	74.5	11		61	64	78	
12	.56	62	66	79	75.5	12	.10	62	63.5	80	76.5	12	.57	63	63	77	
13	1.53	58	63.5	81	76	13		63	62.5	80	77	13	1.99	62	63	71	
14	1.20	62	64.5	78	73.5	14		63	64	78	77	14	.09	58	61	65	
15		60	63.5	77	72.5	15	.01	62	63.5	76	75.5	15		.02	56	59.5	67
16		60	63.5	74	70.5	16		59	60.5	75	75	16	.01	50	56.5	67	
17		58	61.5	73	71.5	17		58	61.5	77	76	17		57	60	67	
18		59	62.5	75	72.5	18		58	60	75	75.5	18	.03	55	59	68	
19		60	64	75	73	19		58	61.5	81	79	19		54	59.5	68	
20		59	64	77	74.5	20	.01	58	62	77	76.2	20		56	61	74	
21		59	64	80	76.5	21		58	61.5	79	77	21		58	61.5	76	
22	.44	58	64	79	77	22		62	62.5	75	73	22		60	62.5	78	
23		63	66.5	83	78	23	.72	61	62	67	69.5	23	2.87	59	60	74	
24	.06	64	67	80	77	24	3.44	62	63	74	74	24	.26	56	56.5	71	
25		64	67	83	78	25	.77	60	62.5	72	73.5	25	.05	58	58	69	
26		64	67	84	77.5	26	.08	62	63.5	76	73.5	26		56	58.5	71	
27	.95	62	65.5	79	75	27	.00	61	62.5	76	74.5	27	.10	54	58.5	72	
28		62	65.5	77	74.5	28	.04	61	62.5	79	77.5	28		56	59.5	70	
29		62	65	71	71	29	.38	62		78		29		56	61	68	
30	.08	63	65.5	80	75							30		55	60	68	
31	.07	63	65.5	80	75							31		55	59	67	
Tot.: 9.56in. (Aver. 8 yrs. 12.60in.)						6.72in. (Aver. 8yrs. 8.785in.)						9.72in. (Aver. 8yrs. 1					
APRIL.						MAY.						JUNE.					
Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.	Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.	Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.
1		55	57.5	69	71	1		56	55	70	68.5	1	.05	56	53	67	
2	.47	60	59.5	73	71	2		56	56	68	67.5	2		53	50.5	65	
3	1.11	58	58	74	72	3		56	55	68	68.5	3		54	48	65	
4	.34	59	56.5	74	71.5	4		51	54.5	66	68.5	4		53	48	67	
5	.02	60	58.5	71	71	5		56	57.5	72	72.5	5		55	50	68	
6	.13	61	59	71	73	6		52	56	70	70.5	6		53.5	52.5	67	
7	.08	58	60	71	72	7		56	56.5	73	71.5	7		51	49	66	
8		58	57.5	67	69.5	8		55	56.5	72	72	8		48	46	65	
9		56	58.5	68	70.5	9		57	57.5	74	71.5	9		54	47.5	68	
10		56	58.5	67	71	10		58	57.5	74	72	10		57	51.5	69	
11		55	59	67	69.5	11		58	55.5	70	67	11		53	49.5	65	
12		51	56	67	69	12		54	52.5	68	66.5	12		50	49.5	65	
13	.03	54	57.5	65	68	13		53	54	67	65	13		53	50.5	64	
14		56	57.5	66	68.5	14		56	54.5	68	66	14		48	47	60	
15		54	57.5	67	69.5	15		54	53.5	67	66	15		49	47	58	
16	.02	54	56.5	66	70	16	.01	56	54.5	67	66	16		47	42.5	64	
17		55	57	67	70.5	17		55	54	69	66.5	17		48	45	68	
18	.02	53	56.5	65	67.5	18	.01	53	53	69	69	18		55	48.5	65	
19	.01	52	55	69	66	19		54	53.5	67	68	19		50	47	62	
20		54	53.5	67	65	20		52	53	68	69.5	20		47	46.5	59	
21		55	54	70	68	21		51	52	68	70	21		49	48	60	
22		56	54.5	68	68	22		51	53	68	66.5	22		43	46	57	
23		55	56	70	69	23		54	53	70	64.5	23		45	47	63	
24		57	56.5	72	69	24		54	52	69	65	24	.02	50	50	67	
25	.04	56	54.5	72	70	25		51	50	66	65.5	25	.02	47	48	65	
26	.78	56	54.5	69	63	26		50	51	69	67	26		50	48	63	
27		54	54	69	63.5	27		53	52.5	68	66.5	27		53	49.5	60	
28	.02	54	55	68	69	28		48	51	65	64.5	28	.06	48	49	60	
29		53	53.5	67	67.5	29		50	51	67	65.5	29		49	48	60	
30		54	54	68	67.5	30		54	51	67	64	30		46	45.5	61	
						31		55	50	68	66						
Tot.: 3.07in. (Aver. 8yrs. 1.486in.)						.02in (Aver. 8yrs. .84in.)						.15in. Aver. 8yrs. .22					

# RAINFALL FOR THE YEAR 1888 (SEE NEXT PAGE).

JULY.						AUGUST.						SEPTEMBER.					
Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.	Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.	Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.
1		50	48.5	63	60	1		44	44.5	60	60.5	1		48	50.5	62	63
2		50	49	61	59.5	2		49	45.5	62	61	2		51	51.5	67	67
3		46	47	61	59.5	3		45	44.5	63	63	3		46	50	67	65.5
4		50	49.5	62	63	4		46	46.5	60	63	4		48	48	65	63
5		52	50.5	64	64.5	5		50	49	61	62	5		50	50	66	64
6		50	47	60	60	6		46	48	59	60.5	6		51	49.5	66	63.5
7		47	48	64	61.5	7		49	48.5	60	60	7		46	47	65	62.5
8		50	48.5	62	60	8	.02	45	45	61	61.5	8		45	46	64	64
9		52	49.5	65	61.5	9		44	46.5	61	61	9		47	48.5	67	66.5
10		49	49	62	60	10	.02	50	46.5	63	61	10		47	48	70	63.5
11		49	48	63	61.5	11		47	46.5	63	60.5	11		52	50.5	73	66.5
12		53	48.5	61	61.5	12		50	47	60	58.5	12	.37	54	51	67	64
13		49	48.5	62	61	13	.02	54	50	60	59.5	13		50	50	68	66
14		46	45.5	64	63.5	14		50	48	59	59	14		47	48.5	64	66.5
15		46	48	64	65.5	15		45	48.5	60	61	15		47	49	60	66
16		48	51.5	64	63.5	16	.01	47	44.5	62	62	16		47	49	64	67
17		50	50	62	62.5	17		46	47	62	63	17		48	48.5	64	66.5
18		50	49.5	62	62	18		46	48	64	65.5	18		50	48.5	64	64.5
19		46	46.5	61	61.5	19		47	47	63	67	19		49	47.5	70	67.5
20		49	46.5	60	60.5	20		44	40.5	63	64.5	20		50	47.5	74	70
21		48	46	62	62.5	21	.12	51	50	61	61.5	21	.01	55	50.5	68	69.5
22		46	48	61	60.5	22		51	49	65	61.5	22	.17	55	53.5	70	70
23		48	49	60	61.5	23		51	47.5	62	58	23	.05	55	53.5	73	69.5
24		50	49.5	65	63	24		52	49	63	60.5	24		57	54.5	71	70.5
25		50	50	62	62.5	25		52	49	68	64	25		55	53.5	73	70.5
26	.03	47	48.5	56	61.5	26		52	49	66	63	26	.33	58	53	75	71.5
27		46	47.5	58	62	27		52	49.5	68	64.5	27	.11	57	55	76	74.5
28		46	47.5	58	60	28		55	53	69	66.5	28	.60	58	56.5	75	77.5
29	.02	48	47.5	60	60.5	29		56	52.5	68	64.5	29		58	57.5	75	77
30		48	47.5	62	62	30		52	49.5	62	65	30		56	58	76	77.5
31		48	47.5	62	62.5	31		49	50.5	61	65.5						
Tot. : .05in. (Aver. 8yrs. .20in.)						.19in. (Aver. 8yrs. .18in.)						1.64in. (Aver. 8yrs. 1.00in.)					
OCTOBER.						NOVEMBER.						DECEMBER.					
Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.	Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.	Date	Rain	Min.	Aver. 2yrs.	Max.	Aver. 2yrs.
1		58	58.5	78	74	1		61	59	76	78.5	1		58	58	75	75.5
2		60	57.5	76	74.5	2	1.66	58	58	74	76	2		60	61	80	78
3	.32	58	56.5	65	67.5	3	2.56	56	57	76	77	3		62	60	80	76.5
4	.54	52	53	63	64.5	4		58	57	77	77	4	.07	62	58	81	78.5
5		54	52	68	66.5	5	.01	61	58	78	79	5		63	58.5	82	79
6		54	52.5	67	66	6		58	58.5	78	81.5	6	1.05	61	58	74	75.5
7		56	52.5	68	66	7	.71	57	58	77	80	7		60	58.5	73	73.5
8		53	51	68	69.5	8	.06	59	59	79	78.5	8		59	56.5	74	75.5
9		52	52	72	71	9		59	58.5	79	74	9		59	59	74	78
10		56	56	71	68.5	10	.01	56	56.5	71	70	10	.11	61	60.5	77	78
11	.38	57	55	76	72	11		56	56	71	71.5	11	.25	60	59	82	78.5
12	.27	57	54.5	70	68.5	12		54	54	71	72	12	.28	61	56.5	79	77
13		57	55	72	72	13		52	52	70	72.5	13		62	59	80	78
14		54	55.5	72	72.5	14		53	53.5	77	76.5	14	.05	63	58	83	80
15		57	57.5	77	75.5	15	2.33	57	57	69	73	15		65	60.5	83	81
16		58	59.5	79	78.5	16	.30	56	56.5	75	78.5	16		60	59.5	79	78
17	.01	58	57.5	76	74	17	.23	60	58	75	75.5	17		61	61	76	77.5
18	.09	56	56.5	68	70.5	18		59	57	79	77	18		62	61	77	76.5
19	.48	53	54.5	69	70.5	19	.18	60	56.5	80	79	19	1.01	60	59.5	77	75
20	.08	52	54	68	73	20	.93	60	58	76	77	20	1.22	60	59	80	75.5
21		53	56.5	69	74.5	21	.86	60	59	80	79	21	.02	60	58	75	74
22		51	55	70	72	22	.13	61	59	76	78.5	22	.15	60	58	70	70.5
23		53	54	74	73	23		60	60	75	78.5	23		57	56.5	73	72.5
24		56	55.5	78	72.5	24	.08	60	59.5	74	76	24	1.08	60	58.5	76	74.5
25		59	54.5	76	73	25	.18	58	58.5	74	73	25	.59	59	58	78	74
26		60	57.5	82	80	26		59	58.5	73	72	26	.77	62	59.5	79	78.5
27		62	59.5	80	78	27		58	57	76	75	27	.28	62	62	76	77
28		57	56.5	79	75.5	28	.11	60	59	77	77.5	28		62	62	80	77
29		58	59	82	80.5	29	.23	61	60.5	81	80	29	.26	61	61.5	78	75.5
30		59	59	83	79	30		60	60.5	77	78	30		60	60	79	76.5
31		61	57.5	84	79.5							31	.09	62	60.5	80	79.5
Tot. : 2.17in (Aver. 8yrs. 3.16in.)						13.27in. (Aver. 8yrs. 6.51in.)						7.28in. (Aver. 8yrs. 10.095in.)					

# DAILY TABLES (WITH AVERAGES) OF THE TEMPERATURE AND RAINFALL, 1888.

THE observations contained in the preceding tables have been taken at Faravohitra (*vide* ANNUAL, 1887, p. 396).

The first column indicates the day of the month : the second, the rainfall for the 24 hours ending at 8 a.m. ; the third, the temperature during the night ; the fourth, the average for two years ; the fifth, the highest point touched during the day, and the sixth gives the average for two years.

The greatest heat registered has been 84° F., Jan. 26th, and Oct. 31st. In 1887, the highest was 85° F., and the lowest 38° F.

The easterly winds were unusually frequent at the beginning of the year : but during the latter part, the westerly winds have been much more than usually frequent. During the last six days of October the average heat was greater than we remember either at that or any other part of the year during our residence here, now nearly twenty years.

There were some severe storms at the commencement of the year, and that of the 20th of March did much damage. At the beginning of this rainy season we had very heavy hail-storms, and it is said that in one place the hailstones were almost as large as a child's fist.

At the end of each month we give the total rainfall and the average for 8 years. It will be noticed that the fall for the year is slightly above the average, being 53.84 in. Seven months, January, February, May, June, July, October and December, were *below* the average, and the rest *above*, November giving us the largest fall for the month of the eight years.

There have been five earthquake shocks, or rather, earth tremors, recorded, viz. on Jan. 12th, March 17th, June 8th (two), and October 30th.

For easy comparison we append the rainfall of the past 8 years :—

1881 = 42.12 in.	1884 = 68.86 in.	1887 = 65.08 in.
1882 = 41.08 "	1885 = 52.19 "	1888 = 53.84 "
1883 = 57.65 "	1886 = 47.28 "	Average for the 8 years 53.51 in.

## Comparison of Heat of Ambatondrazaka (Sihànaka) and Antananarivo.

Aug.—Dec. 26th, 1888.

Degrees in Farenheit	A- dza- ka	Cap.	Dif.	Degrees in Farenheit	A- dza- ka	Cap.	Dif.
Aug. : Highest during the day	82	69	13	Nov. : Highest during the day	90	81	9
Lowest " " "	62	59	3	Lowest " " "	77	69	8
Highest " " night	66	56	10	Highest " " night	68	61	7
Lowest " " "	48	44	4	Lowest " " "	58	52	6
Sept. : Highest during the day	86	76	10	Dec. : Highest during the day	92	83	9
Lowest " " "	70	60	10	Lowest " " "	75	70	5
Highest " " night	66	58	8	Highest " " night	70	65	5
Lowest " " "	50	45	5	Lowest " " "	63	57	6
Oct. : Highest during the day	95	84	12	Compiled by J. RICHARDSON.			
Lowest " " "	67	63	4				
Highest " " night	68	62	6				
Lowest " " "	56	51	5				

Mr. J. G. Mackay has sent daily readings from Ambatondrazaka. The thermometer is exactly the same as Mr. Richardson's at Faravohitra, and it hung side by side with Mr. R.'s until Mr. Mackay bought it and commenced making observations in August.

J. RICHARDSON.

• This was erroneously put 59.19 in last ANNUAL.

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